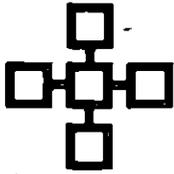


**Comhairle na n-Ospidéal**

**Development of  
Hospital Maternity Services**

**-a discussion document**

MEMO



# Comhairle na n-Ospidéal

## Development of Hospital Maternity Services

- a discussion document



### Introduction

The objectives of health care in relation to maternity services may be summarised as:—

- monitoring and maintaining the health of the mother during pregnancy through regular ante-natal care,
- ensuring safe delivery under skilled supervision,
- ensuring that, through skilful attention, the infant is given the best chance of optimal health and normal development.

This report is intended as a contribution to getting general agreement on how best to attain these objectives so that the Comhairle can perform its task of structuring consultant posts with maximum efficiency and to give maximum satisfaction.

The report starts from the assumption that the present pattern of services is not necessarily the best for the future. Ireland has a changing population structure; there have been considerable advances in medical knowledge and practice since the present pattern of services evolved; and, recently, the announcement by the Government of its plan for fewer and larger general hospitals and their location has considerable implications for maternity services.

The report is divided into five sections—Section 1 deals with the changing structure of our population and gives some basic data on maternal and infant mortality; Section 2 argues the case for every expectant mother having ready access to care at a consultant-staffed obstetric/neonatal unit; Section 3 makes proposals for obstetric services in Dublin; Section 4 with obstetric services in cities other than Dublin; and Section 5 with obstetric services outside the large population centres.

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# Section 1 - Demographic Data and Data on Maternal and Infant Mortality

1.1. **Population likely to increase substantially**—From the years 1921/24 onwards the population at no time reached the figure of 3 million until 1972. The estimated figure in April 1973 was 3,051,000; in April 1974 it was 3,086,000 and in April 1975 it was 3,127,000 (Central Statistics Office). This figure represents an estimated increase of almost 5% on the population at the 1971 Census (2,978,248). The change has been due to a combination of natural increase and zero net emigration. On the contrary, the published population estimates indicate that there was net immigration each year, the total for the four years April 1971 to April 1975 being about 10,000.

1.2. There is now a wide measure of agreement that a continuing expansion of the population is in prospect during the period up to the end of the century. A population of 4 million is considered likely at some point around that time.

1.3. **Emigration Decline Should Enhance Prospects of an Increase in Births**—In the past, emigration had the effect of significantly distorting normal patterns of age and sex distribution in the population. The great majority of those who emigrated were young men and girls of marriagable age, and this left a gap in the numbers of young active men and women remaining in the community which is still very much in evidence. (Figure 1 is a graphic illustration of the age structure of the population based on

the 1971 Census. The distorting effect which emigration has had on the "shape" of the population is represented by the indentations applying to the 20-40 age groups). Emigration also substantially reduced the numbers of young people potentially available for marriage and the founding of families in Ireland. Nevertheless, the high fertility (or re-productivity) rates in Ireland, as compared with Western European countries, had the effect of giving us a comparatively high birth rate—in excess of 20 per 1,000 total population. This rate was, however, understated in relation to comparisons with other European countries, because the ratio of the number of married women of child-bearing age to the total population was considerably lower in Ireland than in these other countries.

1.4. The ending of large-scale emigration of young people from Ireland is, however, rapidly changing our exceptional population shape. Professor B. Walsh, whose study "Population and Employment Projections 1981-86" was published in February 1975 by the National Economic and Social Council, has shown how dramatically the young adult population will change if a zero or low net emigration continues. Figure 2 illustrates his findings based on the assumption of a net emigration of 5,000 per year.

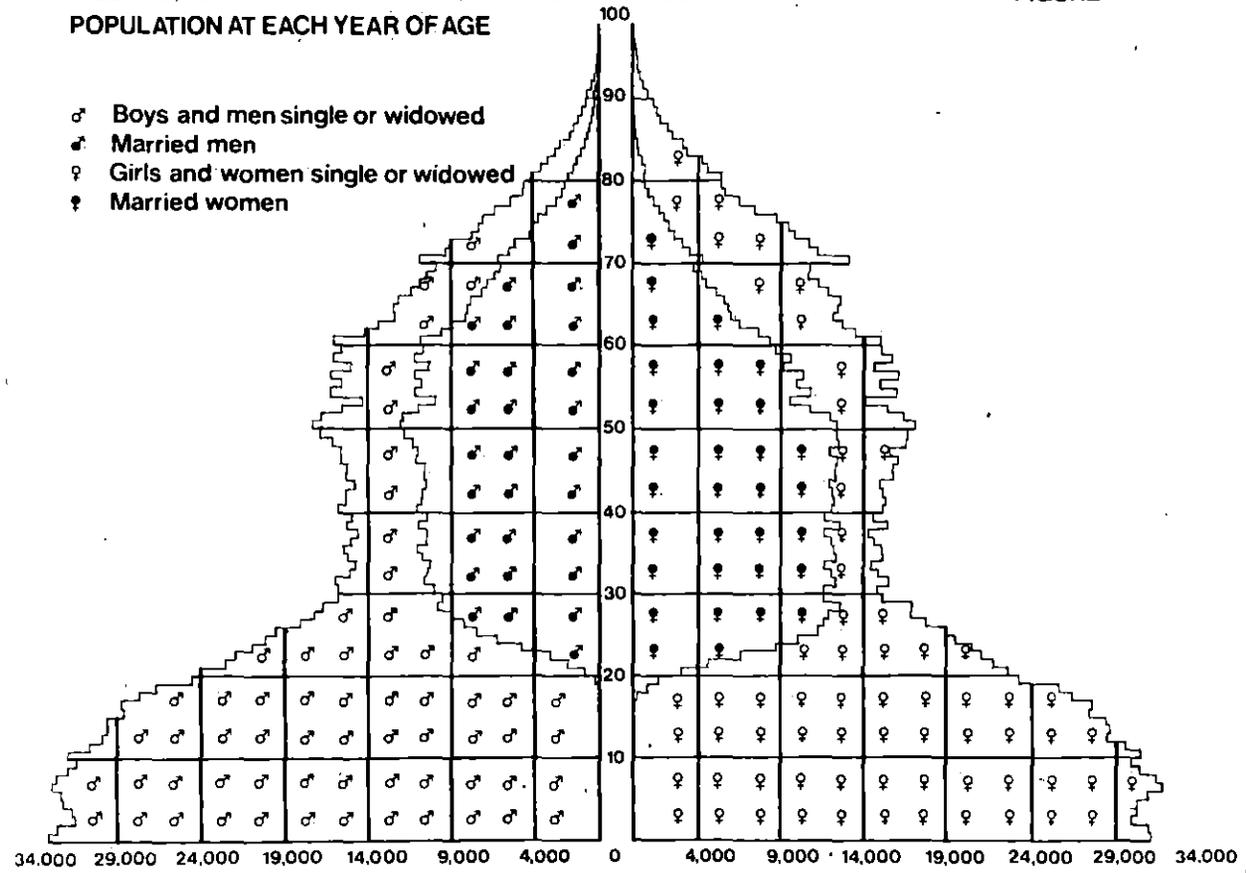
1.5. The younger adult age groups, and particularly people aged under 35 years, make a major contribution to

IRELAND, 1971  
POPULATION AT EACH YEAR OF AGE

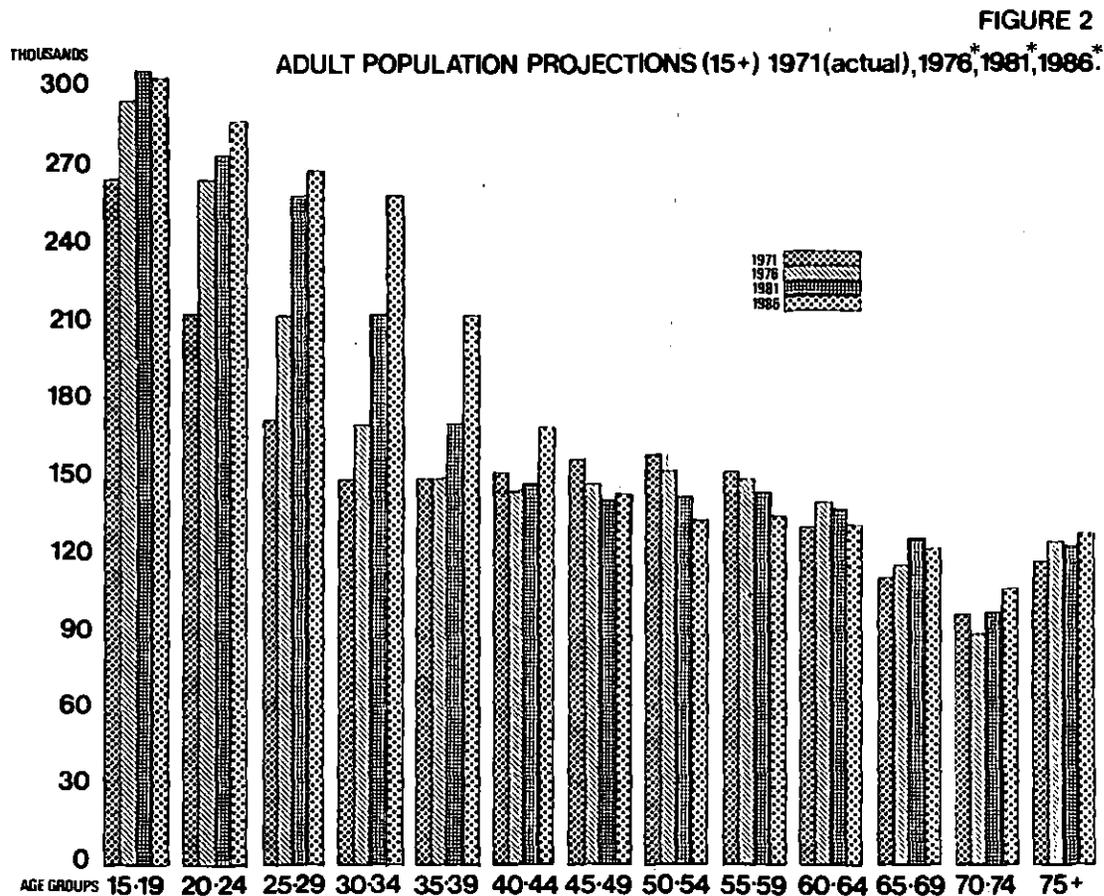
YEAR OF AGE

FIGURE 1

- ♂ Boys and men single or widowed
- ♂ Married men
- ♀ Girls and women single or widowed
- ♀ Married women



Source Vol.11, Census, 1971 B.H.



\* As projected by Dr. B. Walsh in Table 2—Population and Employment Projections 1971-86.

the numbers of births occurring. The prospect of a marked expansion in numbers in these age groups over a relatively short period would suggest that the number of births should increase substantially. The progression from 62,912 births in 1969 to 64,092 in 1970 and 67,752 in 1971 encouraged this expectation. Since 1971, however, the numbers of births have levelled off—67,643 in 1972, 67,992 in 1973 and 68,784 in 1974. This levelling off is all the more unexpected when account is taken of marriage rates. These have, in the past, been low by European standards (under 6 per 1,000 population for a long period up to 1967). From 1967 onwards, the rates advanced annually from 6.1 in that year to 7.3 in 1974. This recent rate is about average for the E.E.C. countries. The numbers of marriages taking place in Ireland in 1973 and 1974 exceeded 22,500 per annum. This is 5,000 per annum higher than the average for the decade 1961/70.

1.6. The explanation for this levelling off in the number of births is a much sharper decline in fertility (or reproductivity) than past trends would have suggested. There was clear evidence of declines before 1971 in the rates for married women except those under 20 years. From 1961 to 1971 the percentage declines for each five year age group from 20 up to 49 years were 4.3, 11.0, 16.9, 20.9, 24.3 and 27.6. This pattern emphasised the declining contribution of older married women to the total number of births and was consistent with the fall in the size of families. Having regard to the levelling off in total annual births from 1972 to 1974 and the very recent

evidence of a slight downturn in 1975 (births for the year 1975 being down 1,276 on the year 1974) it now seems improbable that even the lowest of Professor Walsh's four projections of average birth numbers for 1971/76 (68,700) will in fact be achieved. In short, it looks as though a quite dramatic change has been occurring recently in the reproductive activity of married women of different ages. Such a change arising in the first five years covered by Professor Walsh's study (which extends over fifteen years) would unfortunately tend to diminish the value of his longer term projections in relation to births. It is, therefore, of great importance to collect precise data which would remove speculation as to what has happened in each age group over the five years 1971/76. With this information a new and more realistic set of projections could be made to clarify what the future may hold as regards birth numbers.

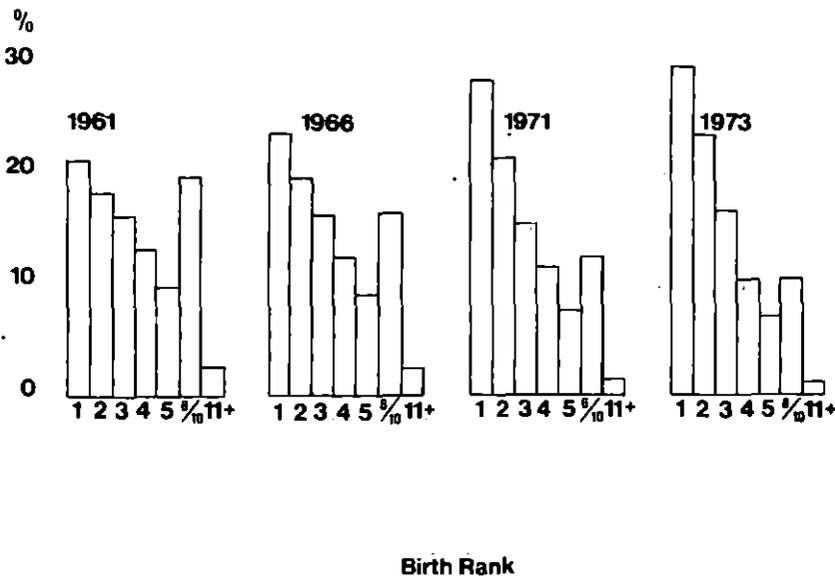
1.7. In addition to the need to clarify the new patterns of reproductive activity on a countrywide basis, there is also a need to consider regional variations. A study of the data available from the Census of 1971 in relation to the births in that year to married women in the different age groups shows considerable local variations. It is important to establish what further geographical variations in fertility have occurred since 1971.

1.8. In this unexpected situation, forecasts of future numbers of births must largely be based on speculation. The present sharp downturn in fertility rates poses the question as

to whether the decline will continue at a regular pace perhaps levelling off at some new low point. Considered in the E.E.C. context, fertility rates are still very high in Ireland. In 1973, the average of the birth rates for the nine countries of the community was 14.6 per 1,000 population. Such a rate applied to our projected population of 3,500,000 and later

4,000,000 would give annual birth numbers of 51,100 and 58,400 as against the 68,784 births which occurred in 1974. This is not to suggest that the birth rate in Ireland is likely to fall to such a low figure but it does suggest that it can no longer be regarded as axiomatic that a bigger population will produce a substantially increased number of births.

**FIGURE 3**  
**Percentage distribution of births by birth rank, 1961, '66, '71, '73.**



**1.9. Earlier Marriages and Births, Falling Family Size**—There has been a continuing fall in the average ages of brides and grooms at marriage. The proportion of brides under 30 years increased from 76% in 1961 to 87% in 1971, more than half of the total number being in the age group 20 to 24 years in the latter year. The ages of mothers at the time of the first birth have also been falling. Between 1961 and 1971 the percentage of the total of first births attributable to mothers under 30 years increased from 73% to 85%. The percentage attributable to mothers over 30 years fell by nearly half over the same period. The average number of children born per family is 3.45. This is high by western standards but is tending to fall in step with the decline in fertility. An indication of the downward trend is given by the change in the distribution of births by birth rank (i.e. 1st, 2nd, 3rd, 4th etc. births). This is illustrated in Figure 3. The contribution of first and second births to the total is increasing, that of third births fairly stable and births of fourth and higher rank on the decline. In 1973, first, second and third births combined represented 70.1% of total births compared with 55% in 1961. The implications of these trends to the maternity services will be the occurrence of a large number of cases in birth ranks 1 to 3 and a diminution in the higher parity cases, with a consequent reduction in the serious complications that accompany high parity.

**1.10. Maternal Mortality Reduced**—As a consequence of advances in medical science, improvements in

living standards and better obstetric services, there has been a substantial decline in maternal mortality in Ireland over the last quarter of a century from a rate of 164 per 100,000 live births in 1951 to 40 in 1972. The annual review of deaths, associated with pregnancy, contained in the maternal mortality reports of the Irish Medical Association (which has been in operation since 1964) has contributed to the acceleration of this improvement by identifying avoidable adverse factors associated with these tragedies. Clinical reports from maternity hospitals have also made a valuable contribution in the same context. The comparison between Ireland and neighbouring countries in respect of maternal mortality is indicated by the following rates per 100,000 live and still births:—

	1972	1971	1970	1969
Ireland	40	25	31	31
Northern Ireland	10	19	0	15
England & Wales	15	17	18	19
Scotland	16	16	19	14

**1.11. Infant and Perinatal Mortality Lower**—Infant deaths in Ireland have also shown substantial declines. The death rate (per 1,000 live births) of infants under one year fell from an average of 36.6 in 1951/60 to 18 in 1972. The following table shows how the improvement was reflected for different infant age groups under one year between 1951/60 and 1972:

## IRELAND—INFANT MORTALITY RATE BY AGE

Period	Under 24 hours	1—6 days	7 Days & under 4 weeks	4 weeks to 1 Year	Total under 1 Year
1951/60	7.8	8.7	6.1	14.1	36.6
1972	5.7	4.6	1.8	6.0	18.0

(Source—Reports on Vital Statistics—Central Statistics Office)

1.12. Although the percentage reduction in the mortality rate for infants under one year was 51% over this period, the decline in the rate for infants aged under 24 hours (27%) was much smaller. It should be noted that infant deaths at ages under 1 week represented 57% of total infant deaths in 1972 as against 45% in 1951/60. The infant mortality rate was level with that for England and Wales

in 1972 and lower than that for Northern Ireland (21) and Scotland (19). The perinatal death rate shows improvement with a fall from 28.6 in 1966 to 23.2 in 1972. Late fetal deaths have also declined from a rate of 15.8 in 1966 to 13 in 1972.

The following table shows the causes of late fetal deaths and deaths of infants under 1 week in 1972:—

CAUSE	Late Fetal Deaths	Deaths of infants under 1 week	
		Under 1 Day	1 Day to 1 Week
Enteritis and other diarrhoeal diseases	—	—	1
Other infective and parasitic diseases	—	—	6
Meningitis	—	—	6
Influenza, pneumonia, bronchitis, emphysema, asthma and other respiratory diseases	—	4	1
Congenital anomalies	192	96	74
Birth injuries	27	22	28
Haemolytic disease of newborn	62	17	9
Anoxic and hypoxic conditions not elsewhere classified (including asphyxia and atelactasis)	106	136	115
Immaturity, unqualified	12	92	36
Other conditions of fetus or newborn (including haemorrhagic disease)	8	5	12
Other causes	494	21	26
<b>TOTALS</b>	<b>901</b>	<b>393</b>	<b>314</b>
<b>GROSS TOTAL — 1,608</b>			

(Table XXXV—Report on Vital Statistics 1972—Central Statistics Office)

Perinatal mortality associated with congenital malformations is not amenable to significant improvement in the foreseeable future. But perinatal loss from birth trauma should be amenable to substantial reduction as the trend towards delivery in consultant staffed units grows. Perinatal mortality from haemolytic disease is decreasing rapidly thanks to the prevention of this problem by immunotherapy. Perinatal problems associated with anoxic and hypoxic conditions may be expected to

decrease as refinements in obstetrical techniques of intrauterine diagnosis become more widespread, and neonatal paediatric staff and facilities are provided in delivery units. Many such cases are associated with the birth of premature babies, or mature babies who have failed to gain weight in utero. These form a group upon which intensive care is increasingly being successfully applied. Such care should form an essential part of a modern consultant-staffed delivery unit.

## **Section 2 - The Need for Consultant-Staffed Obstetric/Neonatal Units**

2.1. The case for obstetric/neonatal units—Babies of low birth weight form a large component of neonatal morbidity. Low birth weight may be due to premature birth, or retarded fetal growth. Congenital abnormalities contribute another sizeable component to the neonatal morbidity. Where prematurity is the cause of low birth weight, survival with normal development depends on the availability of expert obstetric care at the time of delivery, and expert paediatric care subsequently in the neonatal period, when respiratory and metabolic complications require intensive supervision and management. As the prevention of premature labour has not been consistently successful to date, great importance must be attached to ensuring that delivery takes place in a consultant-staffed obstetric/neonatal unit, because this factor will largely determine the successful survival of the premature baby.

2.2. Where defective intrauterine growth is associated with babies of low birth weight, the obstetric problems involved are particularly important. These generally require the application of a number of sophisticated and serial investigations during the later weeks of pregnancy, in order to determine the intrauterine growth and welfare of the fetus, and to determine the optimum time for delivery. Induction of labour is often required, and a higher proportion of patients than normal require caesarean section. As in the case of premature births, the low-weight babies resulting from such cases also require intensive paediatric care. Considerations of this sort make hospital confinement in an obstetric/neonatal unit a critical factor in relation to the safety of the mother and child.

2.3. As other components of perinatal loss decline, congenital abnormalities constitute an increasing proportion of

the whole. Many congenital abnormalities are untreatable, but in the case of those which are treatable, the welfare of the infant depends largely on the quality of paediatric care available from the time of birth. This, too, constitutes a strong argument for confinement in an appropriately staffed unit.

2.4. The decline in perinatal mortality over the last decade has been achieved in considerable measure because of improvements in obstetric management of selected cases, where the fetus is considered to be at risk. Intrauterine diagnosis, caesarean section, and elective induction of labour undertaken in the fetal interest are relevant in this context. But this type of management, which currently forms such a large part of the activity of a maternity hospital, can only be undertaken with safety when expert obstetric and paediatric services are available to the mother and child. Increased obstetric intervention in selected cases has inevitably increased the amount of short-term morbidity of mother and baby. Mothers more frequently undergo either induction of labour, assisted delivery, or caesarean section in the fetal interest; and the infants concerned require increased paediatric care, especially when they are below average birth weight. The outcome has been increased numbers of healthy survivors who might otherwise have failed to survive. Concern amongst expectant mothers about these considerations has been an important factor influencing the demand for hospital care at confinement.

2.5. The conclusion which the

Comhairle draws from the foregoing is that *if the basic aims of ensuring safe delivery and giving the infant the best chance of optimal health and normal development are to be achieved, every expectant mother should have ready access to care at a consultant-staffed obstetric/neonatal unit.*

2.6. Location of obstetric/neonatal unit—There are compelling reasons why such units should not be developed in isolation but should form part of a general hospital campus so that the fullest use may be made of the medical expertise and the diagnostic services which would be available in such a hospital. The immediate availability of specialised general hospital services such as radiology, pathology, general and specialised medicine and surgery together with the supporting staff and facilities—medical, nursing and para-medical—may be of critical importance to the welfare of the mother and infant alike. Anaesthetic services, which are most satisfactorily provided on a shared basis between a general hospital and an obstetric/neonatal unit are also of increasing importance to the welfare of the mother and infant. The need for emergency cover is unusually high in obstetric units and an anaesthetic service must be provided with minimum delay at any time of the day or night. Anaesthetic services in the future are likely to expand to include the administration of conduction (epidural and caudal) anaesthesia; a more active part in the resuscitation of neonates; and an occasional but important role in the maintenance of respiration in unconscious patients.

The scope for pain relief in delivery rooms is still considerable and it is to be hoped that anaesthetists will take a more active part in this aspect of obstetric care in the future.

### 2.7. Out-patient Antenatal and Postnatal Services at Consultant

③ level—Many considerations point towards the concentration of in-patient obstetric services, at consultant level, into viable centres catering for, at the minimum, 1,500 to 2,000 deliveries per annum (see later Section 5.1 of this document). In many areas outside the main population centres, the implementation of the recommendations in this document would involve the closing of existing small maternity

units which are not viable and fall below the standards required for the practice of modern obstetrics. In the Comhairle's view, it is essential for the success of re-organisation on the lines recommended, that antenatal clinics should be conducted regularly, by consultants from the main maternity unit, at convenient local centres within the catchment area served by the unit. It is of the greatest importance that the holding of such consultant clinics should be a prominent feature of a re-organised system of obstetric care, particularly in less densely populated areas of the country.

## Section 3 - Obstetric Services in Dublin

3.1. In considering the future arrangements for the obstetric services in Dublin, the Comhairle took account of the unique position of the three voluntary maternity hospitals, the Rotunda, the Coombe and the National Maternity, whose long history of distinguished services in the care of women in pregnancy and childbirth has been, and is, such a notable feature of medicine in Ireland. While the work of these hospitals has been mainly of benefit to the expanding population of the Dublin area, they care for many patients especially those with problems of special difficulty, from every part of the country. In 1971/72, 24.3% of the 33,824 patients treated in the three hospitals were resident in counties outside Dublin (including 14.4% from Meath, Kildare and Wicklow). The Mastership system (with a seven year term of office for the

holder) operates in all three hospitals and the Comhairle has decided to support the continuance of this system which is calculated to encourage continuous review and improvement of each hospital's guiding medical policy which is a primary function of the Masters. The hospitals operate as independent units, but they collaborate closely on matters of common interest and specifically in their joint annual review of their clinical reports. In more recent times, they have been joined in this collaboration by the smaller unit set up in St. James's Hospital. Two of the three voluntary hospitals are housed in modern buildings. The third, the Rotunda Hospital, has some modern buildings, including the neonatal department, and is planning for additional facilities principally in relation to urgently needed improve-

ments to delivery and operating areas and including 48 new beds.

3.2. The position as to the numbers of births taking place in Dublin and where the mothers are confined, is illustrated in the following table covering the year 1974:

LOCATION OF BIRTHS	NUMBER	LOCATION OF BIRTHS	NUMBER
<b>Voluntary Hospitals:</b>	(20,345)	<b>Private Hospitals:</b>	(2,569)
Coombe	7,629	Mount Carmel	1,854
National Maternity	7,504	St. Michael's	715
Rotunda	5,212	<b>Maternity Homes:</b>	(349)
		Prague, St. Anthony's, St. Helen's, St. Rita's, Stella Maris, Woodside	
<b>Other Public Hospitals:</b>	( 2,753)	<b>Domiciliary:</b>	(213)
St. James's	1,949		
St. Columcille's	568		
St. Patrick's Navan Road	236		
<b>TOTALS</b>	<b>23,098</b>		<b>3,131</b>
<b>GROSS TOTAL</b>			<b>26,229</b>

The most striking feature is the great decline in domiciliary births, now less than 1% of the total for the area. The contribution of the private maternity homes has also declined due, in part, to the closing of some of the larger units. For those that remain the average number of deliveries in the most active units is only 3 per week. The three voluntary hospitals occupy a dominating position in caring for over 77% of the births occurring in the Dublin area. It is notable that the Rotunda Hospital is the only unit of significant scale located in the north side of the city and the Comhairle is firmly of the view that in the development of such further facilities as may be needed to cater for the Dublin population, the aim should be to

correct the present north/south imbalance and provide maternity services in units of adequate scale reasonably convenient to the areas where the mothers live.

3.3. In considering the numbers of births likely to occur in the Dublin

area in the future so that they might relate developments in the obstetric service to the announced development of the general hospital system, the Comhairle faced an impossible problem in view of the rapidly changing position about births as already described (See Section 1). The number of births occurring in Dublin in 1975 was 650 less than for the year 1974. Until more precise information is available about the current fertility trends in the Dublin catchment area, it will not be possible to make forecasts with any confidence.

3.4. The Comhairle accepts the widely held medical view that maternity units should form part of, or (where this is not practicable) be closely associated

with general hospitals. In addition to facilitating specialist medical and surgical care of expectant mothers suffering from conditions which may cause special problems during pregnancy, the provision of specialist paediatric services for the newborn would also be strengthened by this arrangement. In the Dublin situation, the three voluntary maternity hospitals have been developed as independent institutions separate from the general hospitals. The Comhairle considers that, in the long run, each of these large maternity units ought to be physically located on a general hospital campus. However, as long as the present hospitals exist as physically separate entities, close links, including shared departments, should be formed with the appropriate major general hospital units serving the population in the same geographical area. Links with specialist paediatric hospitals would also be desirable. The maternity hospitals would serve the population in the appropriate adjoining sectors of the Eastern Health Board area, and, in addition, cater for a number of specially referred cases from other parts of the country.

3.5. This proposed organisation of the maternity hospital services calls into question the continuance in the long run of the obstetric units at present in (a) St. James's Hospital (1,949 births in 1974), (b) St. Columcille's (568 births in 1974) and (c) St. Patrick's Navan Road (236 births in 1974).

(a) The St. James's unit, which provides an excellent service, is in close proximity to the much larger unit in the Coombe (7,629 births

in 1974). The Coombe by itself is adequate to provide an obstetric service for the population to be served by the developed St. James's general hospital, in addition to catering for a proportion of the patients coming from outside Dublin. The continuance of the unit within St. James's, while entirely acceptable from the medical organisation aspect, would therefore be justified only on the basis of a departure from the idea of roughly corresponding catchment areas for both obstetric and general hospital services. For example, consideration might be given to the transfer of the St. James's obstetric service to the James Connolly Memorial Hospital in Blanchardstown where facilities on a similar scale have been under discussion.

- (b) The unit at St. Columcille's falls substantially below the minimum scale (1,500 to 2,000 births) appropriate to a consultant-staffed unit as laid down in the Comhairle's guideline document (see later Section 5.1.). In any case the National Maternity Hospital would be in a position to cater for the south-eastern sector (including east Wicklow) as well as a proportion of the patients coming from other areas outside Dublin.
- (c) St. Patrick's, Navan Road which dealt with 236 births in 1974 should no longer deal with confinements.

3.6. The general hospital plan for Dublin reflects the view that the investigation and treatment of the

more common conditions, representing the greater part of the work of the proposed major hospitals, should be related to a convenient population catchment area. The individual general hospital might provide such a service for an urban population of upwards of 250,000 people. This concept of a general hospital service related to an identifiable population catchment should greatly facilitate the desirable association of the hospital with the domiciliary, medical, nursing and welfare services in its area and so contribute to the attainment of a fully effective health care service. In the case of obstetrics, the argument for providing a hospital service in the general hospital complex, or in close association with it, is even more compelling when the special domestic problems of expectant mothers, particularly those with young children, are considered. The over-riding consideration in mind is that the obstetric hospital service in Dublin should be part of, or linked closely with, the development of the population-related general hospital system as now settled.

3.7. In addition, there is the basic question of *the maximum size* and capacity appropriate to a large maternity unit catering for a densely populated area. Second only to the anticipated number of births in future years, this issue might strongly influence the planning of future services including the role to be played by the three existing major maternity hospitals in Dublin. The adoption of criteria relating to the maximum size of a maternity hospital would be an important factor in

reaching a final decision on the provision of additional facilities e.g. in Blanchardstown. However, much detailed study would need to be undertaken, in consultation with the three major hospitals, before any firm view could be formulated on the question of maximum size. As of now, the Comhairle is not able to state a definite view.

3.8. **Gynaecology Services in Dublin**—With regard to the gynaecology services in the Dublin City area, it is noted that the present services are very diffused and there is a considerable amount of overlapping of consultant staff throughout the gynaecology units. In considering this, the Comhairle thinks that the most rational approach to finding a solution to this problem would be to look at the situation from the point of view of postgraduate training.

3.9. A major factor to be taken into account in recognising centres for training purposes, is the need to concentrate all in-patient work, and as much out-patient work as possible, into a few centres supplied with the appropriate number of beds and support facilities to achieve recognition for postgraduate training. Under present circumstances, not less than 15 beds would be required. In addition to the gynaecology units of the three large maternity hospitals in Dublin, only three gynaecology units in the Republic of Ireland have been developed as recognised postgraduate training centres. There are 18 such units in Northern Ireland. The Comhairle recommends that the Federated Dublin Voluntary and St. James's Hospitals should, as a priority,

reorganise their gynaecology services into a single location in order to develop a recognised postgraduate training centre for gynaecology. Potential for the development of similar recognised training centres also exists in other hospital groupings in Dublin and merits early examination, bearing in mind that there will be little scope for postgraduate training of Irish gynaecologists outside Ireland in the foreseeable future. Apart from gynaecology training posts, there is a considerable shortfall in the number of gynaecology beds required for service purposes in Ireland. According to statistics published by the Department of Health, there are at present 439 beds designated for gynaecology in the country as a whole. The bed population ratios which have been adopted as targets in various parts of Great Britain would suggest a need in this country for up to twice the existing number of beds. Considerations of this sort have led the

Comhairle to conclude that a considerable need exists for detailed study of gynaecology services and training needs in Ireland in the immediate future. The importance of this is highlighted by the need to train gynaecologists for the future at home, rather than overseas, as has been the practice until recent years.

**3.10. Level of Consultant Staffing in Dublin Maternity Hospitals—**The Comhairle recommends that a reasonable criterion for consultant (whole-time equivalent) establishment in obstetrics and gynaecology should be one consultant per 1,000 births and, where a professorial unit is involved, additional consultant staff must be allocated for teaching purposes. The actual number of consultant staff at each of the three major maternity hospitals is in excess of the above recommendation, but some of these do not have whole-time or maximum part-time commitments.

## **Section 4 - Obstetric Services in City Areas other than Dublin**

**4.1. Cork City Area—**The Comhairle has already put proposals to the Minister for Health and to the Cork Hospitals which take account of obstetric services. These proposals envisage a close link-up between Erinville Hospital and the new regional hospital at Wilton. It is presumed that the Bon Secours maternity unit would continue as part of the private general hospital. In the short term, it is proposed to continue the obstetric unit at St. Finbarr's Hospital, as part

of the joint involvement of the voluntary general hospitals, pending the transfer of their activity later to a general hospital in the north-east of the greater Cork area. At that stage the St. Finbarr's obstetric unit would also be transferred to the north-east hospital. The latter change of location would be made at a time when it is hoped the position as regards prospective birth numbers would be clearer than it is now. The Minister and the interests concerned are urged

to take decisions on the Comhairle proposals on maternity services in the Cork City area as soon as possible.

4.2. **Limerick City Area**—In relation to future hospital reorganisation in the Limerick City area, the view has been pressed locally that the services provided at St. Munchin's regional maternity hospital at Ennis Road should be transferred to the regional general hospital at Dooradoyle. The Comhairle accepts that this would be a desirable development. There is at present close association between the two hospitals and this association, which is highly desirable, should be as closely knit as the circumstances of physical separation permit.

4.3. **Waterford City Area**—The Comhairle notes that two consultant staffed obstetric units function in Waterford, the major unit being at Airmount (where the facilities are rather unsatisfactory and inadequate)

and a small unit in Ardkeen Hospital. Agreement has been reached between the Medical Missionaries of Mary, who provide the service at Airmount, and the South Eastern Health Board that the Airmount service should be transferred to new premises at Ardkeen and a unified obstetric service operated there. The Comhairle agrees on the desirability of this move and urges that the planning of the new facilities should be expedited.

**Galway City Area**—The Comhairle considers that the obstetric hospital service in the Galway regional hospital campus is a model of the kind of arrangement needed to achieve the best results. A wide range of consultant and scientific support services are available from the general hospital while, at the same time, the separate identity and regime appropriate to an obstetric unit is retained.

## Section 5 - Obstetric units outside the Large Population Centres

5.1. Until the recent Government announcement of the hospital plan for the country, the Comhairle did not know at what centres, outside the Dublin City area, general hospital services would be developed in the future. Even now, some questions are not resolved and planning to effect the changes proposed is at an early stage. Consequently, it was decided that the question of obstetric services in such centres should be dealt with in a general rather than a specific way. A concept of a model minimum-scale obstetric unit has been developed in

the context of the statement by the Comhairle on "Guidelines on Consultant Staffing and Related Population Catchment for General Hospitals" (September 1973). This guideline statement, which was accepted by the Minister for Health as the basis for future planning of general hospital services, envisages the following:—

- (a) The minimum consultant staff unit for a general hospital will include, inter alia, two surgeons, two physicians, two obstetrician/gynaecologists, two anaesthetists

and the services of a consultant paediatrician.

- (b) The minimum scale hospital will cater, in normal circumstances, for the needs of a population of 100,000.

Dealing with obstetrics and gynaecology, the document states:—

“Where a significant volume of maternity work arises justifying the provision of a consultant-staffed unit, a minimum of two consultants in obstetrics and gynaecology is required. Such a unit should desirably be associated with a medical/surgical unit.

Adequate anaesthetic, laboratory and radiological services are required. The services of a consultant paediatrician should be available in hospitals where there are obstetric units of this scale.

The annual number of births related to such a minimum unit should lie within the range of 1,500 to 2,000 births”.

5.2. In Section 2 of this document, the case was made for the provision of obstetric/neonatal units, as part of, or in close association with, general hospitals. The distribution of births in 1973 among hospital and nursing home units (a total of 109 in the country as a whole) is given in Appendix 1. In only 12 of these units was the minimum number of births specified in the Comhairle guideline document (1,500 per annum) attained in 1973. Clearly the number of units involved is excessive, and while it will take time to provide, in all parts of the country, a fully acceptable service in obstetrics and paediatrics of the kind described in this docu-

ment, early steps should be taken to discontinue public hospital units which have a very small workload. Almost 39% of the public hospital units (30) dealt with less than 100 births each in 1973 and there must obviously be a serious problem of maintaining satisfactory standards in such units. Clearly, also, there are economic considerations that ought to be considered.

5.3. As was argued above, knowledge and experience in the obstetric field has now advanced to the stage where it is realised that the safety of the mother and, more particularly, the infant depends to a large extent, on high standards of care during all stages of pregnancy. The most crucial period is often the time during which labour and delivery occurs. To an increasing extent, attention is being directed to the importance of neonatal paediatrics. As neonatal mortality declines, so neonatal morbidity assumes increasing importance in relation to its causation and management. An individual is probably at greater risk during the first week of life than at any other period up to the age of forty. Once the first week has been safely passed, his requirements in relation to medical care are greatly reduced. In fact, the situation has been reached in recent times where the needs of the infant, as much as those of the mother, dictate the circumstances in which deliveries occur. It follows that no obstetric unit can function effectively without its complementary neonatal paediatric service. Thus, in the modern maternity service, obstetricians and paediatricians must function as complementary medical teams. There is good

reason to believe that there are individuals suffering from physical or mental handicap which might have been avoidable had they been delivered in the circumstances described in this document, rather than in less favourable conditions which prevailed when they were born. Considerations such as these underline the importance of the availability in maternity units of specialised services such as radiology, pathology, general medicine, general surgery, together with the supporting staff and facilities—medical, nursing and para-medical—all or any of which may be of critical importance to the welfare of mother and infant alike.

5.4. Of course, as is well known, many births are free from complications and do not require sophisticated facilities. However, the difficulty is to predict with accuracy which will be routine and which will be complicated, for medical knowledge has not yet advanced to the stage where such matters can invariably be forecast

with certainty. Where unforeseen difficulties arise, time is usually an important factor and, if the patient is being delivered in circumstances where there is a full range of services—particularly a paediatric service—available within the hospital complex, the likelihood of damage is considerably reduced.

5.5. It is for these reasons that the Comhairle recommends—to repeat—that confinements should take place in consultant-staffed maternity units which would be integrated with general hospitals. If the Comhairle recommendations on the minimum size of a general hospital prevails in the re-organisation of the hospital system, this objective could be realised in the not too distant future.

5.6. Appendix 2 sets out the type of provision which would be appropriate to a model minimum scale obstetric unit catering for 2,000 births per annum.

## Acknowledgments

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COMHAIRLE NA N-OSPIDÉAL  
MAY, 1976

# Appendix 1 - Live Births in Hospitals and Nursing Homes, 1973

Eastern Health Board Area--26,435 live births.

HOSPITAL/NURSING HOME	BIRTHS	HOSPITAL/NURSING HOME	BIRTHS
Coombe	7,531	Mount Carmel	2,032
National Maternity	7,147	St. Michael's	933
Rotunda	4,931	Prague Nursing Home	4
St. James's	2,045	St. Anthony's Nursing Home	174
St. Columcille's	654	St. Heliers Nursing Home	9
Athy	233	St. Rita's Nursing Home	62
Baltinglass	88	Stella Maris Nursing Home	210
St. Patrick's Navan Road	240	Woodside	53
		Prague Nursing Home, Wicklow	89
	22,869		3,566

Southern Health Board area--10,064 live births.

<b>CORK</b>			
St Finbarr's	2,392	Midleton District Hospital.	1
Erinville	2,361	Millstreet District Hospital.	1
Bon Secours, Cork	2,862	Skibbereen District Hospital.	13
Victoria	90	Youghal District Hospital.	55
Bantry	239	Bandon Nursing Home	44
Sacred Heart Home	154	<b>KERRY:</b>	
Bandon District Hospital	21	Tralee Co. Hospital	1,094
Castletownbere District Hospital.	7	Cahirciveen District Hospital.	50
Clonakilty District Hospital.	9	Dingle District Hospital.	4
Fermoy District Hospital.	11	Killarney District Hospital.	304
Kanturk District Hospital.	6	Kenmare District Hospital.	1
Kinsale District Hospital.	22	Listowel District Hospital.	119
		St. Anne's, Mrs. King's, ] Duagh Nursing Homes ]	206
	8,174		1,890

Western Health Board Area—6,425 live births.

HOSPITAL/NURSING HOME	BIRTHS	HOSPITAL/NURSING HOME	BIRTHS
Galway Regional	2,291	Ballina District Hospital.	97
Castlebar	1,727	Belmullet District Hospital.	75
Portiuncula, Ballinasloe	1,187	Clifden District Hospital.	12
Roscommon	314	Swinford District Hospital.	13
		Bon Secours, Tuam	426
		Calvary, Galway	283
	5,519		906

North-Western Health Board Area—3,099 live births.

Letterkenny	1,304	Carndonagh District Hospital.	147
Sligo	773	Dungloe District Hospital.	94
Manorhamilton	164	Donegal District Hospital.	105
Ballyshannon District Hospital	206	Lifford District Hospital.	209
		Gardenhill Nursing Home	97
	2,447		652

North-Eastern Health Board Area—5,020 live births.

Cavan	773	Our Lady of Lourdes	
Monaghan	544	Drogheda	2,484
Dundalk	501	Drogheda Cottage	500
		Trim	218
	1,818		3,202

Midland Health Board Area—2,935 live births

Mullingar	674	Longford District Hospital.	94
Portlaoise	580	Birr District Hospital.	194
Tullamore	894	Our Lady's Nursing Home, ]	
Athlone District Hospital.	290	Edgeworthstown	176
		St. Gerards N.H. Longford ]	
		Carbury House, Nursing Home ]	33
		St. Mary's, Athlone	
	2,438		497

Mid-Western Health Board Area—6,339 live births.

HOSPITAL/NURSING HOME	BIRTHS	HOSPITAL/NURSING HOME	BIRTHS
Limerick Regional Maternity	3,819	Roscrea District Hospital	41
Ennis	325	Thurles District Hospital	130
Nenagh	99	St. John of God Nursing Home	
Bedford Row	782	Ennis	543
Ennistymon District Hospital	70	St. Anthony's & Marian	
Kilrush District Hospital	73	Nursing Homes, Limerick	278
		St. Anne's Nursing Home,	
		Thurles	179
	5,168		1,171

South-Eastern Health Board Area—6,994 live births.

Ardkeen	462	Tipperary District Hospital.	62
Airmount, Waterford	1,280	Clogheen District Hospital.	22
Cashel	108	Dungarvan District Hospital.	148
Clonmel	881	St. Brigid's Nursing Home	
Kilkenny	910	Carlow	256
Wexford	1,205	St. Joseph's	
Carlow District Hospital.	435	St. Philomena's Nursing	
Gorey District Hospital.	362	Homes, Tipperary	318
New Ross District Hospital.	48	Nativity Nursing Home,	
Carrick-on-Suir District		Kilkenny	230
Hospital.	28	Dr. Cuddigan's Nursing Home,	
		Enniscorthy	114
		Parkton Nursing Home,	
		Enniscorthy	125
	5,719		1,275

## Appendix 2 - Model Minimum Scale Obstetric Unit to Cater for 2,000 Deliveries Per Annum

1. Births and Bed Provision—for the purpose of the present exercise birth numbers of 2,000 per annum per unit have been used as a yardstick. In calculating the bed requirements for this model minimum scale obstetric unit, a survey was carried out during a four-week period at two existing large urban maternity hospitals to determine the expected duration of stay and the results were as follows:—

preparation of patients for admission. These rooms, which should not be regarded as part of the bed complement, should be situated at an appropriate distance from the delivery area. In the context of an obstetric unit, which would be an integral part of a general hospital, it would not be necessary to provide a separate reception area solely for maternity patients.

PATIENT CATEGORY	DAYS		TOTAL
	Before Birth	After Birth	
Normal	1.5	5	6.5
Forceps	1.5	6	7.5
Breech	4	6	10
Caesarean Section	3	10	13
Still Birth	1.5	6	7.5
Abortion			3
Antenatal—discharged undelivered			5

These figures indicate a need for approximately 53 beds. Thirty-eight of these beds would be puerperal; 12-13 antenatal; together with two delivery beds. More detailed reasons for the adoption of the above criteria in calculating bed needs are given below. It is emphasised, however, that some flexibility as to bed needs must exist to allow for local circumstances e.g. a scattered rural population catchment; age structure and local birth rates. In addition to the above complement, a model unit should contain two separate rooms with couches and other facilities for the

2. Delivery Room Accommodation—A unit catering for 2,000 deliveries per annum would require facilities for about 5/6 deliveries per day. In obstetric practice it is sometimes necessary to carry out induction of labour. Patients being induced require a high degree of supervision, and special induction beds adjacent to the delivery room are essential. Reported induction rates in Dublin maternity hospitals vary between 20% and 40% and this underlines the need to provide adequate accommodation for this purpose.

**3. Antenatal In-patient Beds**—The survey figures (see paragraph 1) suggest that one-quarter of the obstetric beds in the model unit should be allocated to antenatal in-patients; thus a 2,000 delivery unit with 53 beds would require 12-13 antenatal in-patient beds. It is necessary, however, to make allowances for population density. A catchment area with a scattered isolated population might require a larger number of antenatal beds since some patients might find it very difficult to attend regularly as out-patients. A generous proportion of antenatal beds is essential and skimping on these could have immediate consequences in terms of perinatal mortality and morbidity.

**4. Puerperal Beds**—There should be approximately 38 puerperal beds in the unit. The number of beds required depends, to a large extent, on the duration of stay. In modern circumstances, it should be borne in mind that there is a slow resurgence of interest in breast feeding. Since there is a lack of home help, there may be a growing tendency for patients to remain in puerperal accommodation in maternity hospitals until such time as breast feeding has been established. It should also be recognised that, in the future, caesarean section rates might increase, and these cases occupy puerperal beds for about twice as long as normal cases (see paragraph 1). On the other hand, the length of stay after normal deliveries might be reduced, if community care services are developed. All of these factors would modify a duration of stay.

**5. Single Rooms**—It is envisaged that, in the planning of a model obstetric

unit, provision would be made for a number of single rooms. These rooms should be used flexibly. They would be used for seriously ill antenatal patients suffering from conditions such as pre-eclamptic toxæmia; ill puerperal patients; and mothers of dead or abnormal babies; and for patients opting for private accommodation.

**6. Neonatal Care**—Experience dictates that the number and nature of places for ailing neonates must be elastic and adaptable, due to the marked fluctuations in the size and nature of the demand. Ideally, each infant station should be provided with piped oxygen, compressed air and suction. All babies should undergo a neonatal clinical examination on the first day of life and on the day of discharge. Babies who are considered normal should be discharged to the care of the general practitioner involved, but those who have significant abnormalities would normally be brought back to the paediatric follow-up clinic for appropriate observation.

**7. Intensive Care**—For 2,000 deliveries, not less than 4 and preferably 6 stations should be provided. In such stations either a cot or incubator can be placed, according to need.

**8. Low Birth Weight (L.B.W.) Infants**—The occurrence of L.B.W. infants in urban conditions is 3.6%. This proportion would produce 72 such infants per annum from 2,000 births. The average duration of stay of such infants would be 14 days. Thus, 1,000 cot-days per annum would have to be provided for, requiring a minimum of three cots.

**9. Abnormal Deliveries**—The survey

(see paragraph 1) indicated a forceps incidence of about 12½% of all maternity patients, and this would produce 290 cases per annum. A caesarean section rate of 5% is also usual and this would produce 117 cases per annum.

**10. Out-Patient Antenatal Care—**Antenatal care shared between the general practitioner and the obstetrical staff in the maternity hospital is a growing feature of the obstetric services in this country. It is the common practice for a patient to approach her own general practitioner for the initial visit early in pregnancy. She is then referred by him as soon as possible to the hospital clinic for a booking visit, at which she is seen by a consultant obstetrician, who arranges that whatever investigations are required are undertaken at that stage. Thereafter, she is referred to the general practitioner for continued antenatal care until later in pregnancy, when further attendance at the consultant clinic is often desirable. The prevalence of such combined care schemes makes predictions about the numbers attending hospital clinics uncertain. If, for example, a hospital were providing the bulk of antenatal care, in a 2,000 delivery unit, there would be approximately 400 antenatal patients visiting per week. But where combined antenatal care was extensively practised, attendance figures for subsequent visits at hospital clinics, or local consultant clinics, would be smaller. In any event, there would be approximately 40 first visits per week to the hospital clinic. In present day practice one consultant can see four first

visits, or ten to twelve follow-up visits in one hour. Working at this rate, at least four antenatal sessions per week would be needed, each including ten first visits, and up to seventy repeat visits. Each session of this sort would require the services of one consultant and two non-consultant obstetric staff. It must also be borne in mind that some of these out-patient clinics should be conducted at convenient local centres within the catchment area of the unit. To do this, would require more consultant manpower because of time taken up travelling.

**11. Postnatal Clinics—**Postnatal care for mothers is a service provided by general practitioners, and perhaps for this reason the return rate to hospital clinics is small. A 2,000 delivery unit in urban circumstances might produce only 400 postnatal visits per annum, and to cover this about 8 visits per week each of 15 minutes duration would be a reasonable estimate. These numbers however would vary considerably in different regions and circumstances.

**12. Paediatric Clinics—**Neonatal paediatric follow-up clinics would also vary tremendously but, in general, would be confined to the babies who were found to have feeding or medical problems at time of discharge from the hospital. It is not possible to forecast numbers in these categories but, in general, the numbers returning would probably be considerably larger than the numbers of mothers attending for postnatal examination.

**13. Consultant Manpower Needs—**The Comhairle guidelines recommend the appointment of two obstetrician/gynaecologists for a maternity unit

of the type described in this document. These two consultants would also provide a gynaecology service for the catchment area of the unit. It is assumed that, in a general hospital (of which the model obstetric unit described in this document would be part) catering for a population of 100,000, facilities for paediatric services, other than neonatal services, would be provided. In this situation, two consultant paediatricians would, on the basis of past experience, be desirable. However, in the present state of uncertainty about the future trend of births, the Comhairle has reluctantly concluded that a firm recommendation regarding the organisation of neonatal paediatric services will have to be held over until the position becomes clearer. The anaesthetic needs of the obstetric unit would not require the appointment of consultant anaesthetists, solely for the unit. It is considered that two consultant anaesthetists, both with a major commitment, would cover the general hospital as a whole, including the 2,000 delivery unit. The consultant needs set out in this paragraph are based on the assumption that adequate supporting medical staff will be provided in each specialty.

**14. Records Department—**Obstetrics relies very heavily on the use of records for the management of patients. The task of producing the charts for big antenatal clinics and then re-filing them is not to be underestimated. The whole business of obstetric records would be immensely simplified and rendered more efficient by the initiation of uniform birth records throughout the country.

This is something that might well be achieved within the next few years. The benefits would be immediate.

**15. Social Services—**Maternity services particularly require the administration of social work staff. The recommended staffing for a 2,000 delivery unit would be one full-time social worker with postgraduate qualifications and appropriate administrative support. These recommendations are made in recognition of the fact that obstetric turnover is very rapid, and that changing patterns in society have brought about a great increase in complex social situations such as illegitimacy, marital discord, family disruption, alcoholism, drug taking and psychiatric illness. Much of the case work carried out in obstetric units is "crisis orientated".