

A report on procedures performed by generalists in a rural hospital during a three year period



Curriculum Vitae

Paul qualified at UCT with an MB ChB in 1967 and subsequently obtained the Dip Mid in 1971 and the MFGP in 1974. After four and a half years at Edendale Hospital, Pietermaritzburg he spent two and a half years in private general practice in the same city. This was followed in 1974 by general practice combined with hospital sessional work in Kokstad, southern Natal. He has now completed 21 years in this position. He is group Academy leader for southern Natal and on the rural health committee of the Academy of Family Practice. He is married to Jan, previously medical superintendent at Kokstad Hospital and since January 1995 a member of the medical practice PV Hill and Partners. They have two children, Mark and Lisa.

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Summary

In October 1995¹ the same author wrote a review article in the SA Family Practice on procedural skills in rural practice. These procedural skills are now analysed over a three year period from 1993 to 1995, the purpose being to determine exactly what procedures are both required and being performed at Kokstad Hospital in Southern Natal. We believe that these are not much different from what is being presented to most rural hospitals in South Africa.

Introduction

Kokstad hospital has 198 authorised beds, 226 actual. The theatre complex consists of two main theatres and one minor theatre. An analysis was made of 10 080 surgical procedures performed in the operating theatres during this three year period. Two further aspects are added, an analysis of total obstetric deliveries (excluding caesarian sections, which are included in the theatre statistics) and ultra sound examinations. Deliveries totalled 4 937 and a total number of 5 295 ultra sound examinations were performed. The grand total of procedures was thus 20 312 over a three year period. Kokstad hospital can be considered an ideal base from which to present an analysis of procedural skills. The reasons for this are:

1. 97% of all surgical procedures required are handled in our own theatres and not referred.
2. The medical staff complement and skills have been constant over many

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years. This is largely due to private practitioners being involved in hospital sessional work, thus ensuring continuity of service.

- We have been able to "sub specialise" amongst ourselves thus allowing for a wide range of skills, ie certain procedures are only performed by certain doctors.
- All doctors have higher qualifications ie MFGP's, DA's, DCH's, DIP, OBSTET, etc.

General Surgery

	No	(%)
	4472	29.80
Excisions (Lumps, cysts, etc)	1092	24.41
Abscess	759	16.97
Major suturing	525	11.73
Gastroscopy	424	9.48
Skin Graft	333	7.44
Circumcision	213	4.76
Laparotomy	183	4.09
Amputations:	139	3.10
finger	57	1.27
toe	23	0.51
above knee	23	0.51
below knee	33	0.73
arm	3	0.06
Suprapubic catheters	114	2.54
Herniorrhaphies	78	1.74
Liver Biopsy	76	1.69
Appendicectomy	74	1.65
Hydrocoele	60	1.34
Haemorrhoidectomy	58	1.29
Paraphymosis	55	1.22
Anal stretch	49	1.09
Intercostal drains	47	1.05
Bone marrow	36	0.80
Vasectomy	34	0.76
Pericardial aspiration	31	0.69
Sigmoidoscopy	21	0.46
Anal fistula	14	0.31
Tracheostomy	5	0.01
Orchidectomy	4	0.08
Orchidopexy	3	0.06
Torsion Testis	2	0.04

Results

Theatre cases	10 080
Obstetric deliveries	4 937
Ultrasound	5 295
Grand Total	20 312

The categories of surgical procedures are divided into the following:

- general surgery
- orthopaedics
- obstetrics
- gynaecology
- ENT
- ophthalmology
- other.

Theatre cases and obstetric deliveries
(excluding ultrasound) 15 017

Orthopaedics

	No	(%)
	2686	17.90
Fractures – lower limb	1278	47.58
(Internal fixations)	41	3.02
(Compound fractures)	40	3.12
Fractures – upper limb	962	35.81
(internal fixations)	46	4.78
(compound fractures)	23	2.39
Joint aspirations	123	4.57
Dislocations:	106	3.94
fingers	2	0.07
elbow	26	0.96
shoulder	49	1.02
hip	10	0.37
ankle	3	0.11
knee	2	0.07
jaw	14	0.52
Club feet	73	2.71
Denihim pin	46	1.71
Repair tendons	32	1.19
Osteitis	23	0.85
Osteotomy	12	0.44
Postero medial release (club feet)	5	0.18
Patellectomy	5	0.18
Tennis elbow	3	0.11
Menisectomy	2	0.07

In this rural hospital 97%
of all surgical procedures
are dealt with right there.

Ultrasound and gas-
troscopy very important
for rural practice.

Transport of emergency
patients may be harmful.

Patients prefer to be treat-
ed within their own com-
munities.

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Obstetrics

	No	(%)
Caesarian section	5774	38.45
Manual removal placenta	737	12.76
Shirodkhar	61	1.05
Prostins (intra cervical plus extra amniotic)	15	0.02
	24	0.04

Additional Obstetric Statistics

Deliveries	4937	
Caesarian Section	737	
C/S Rate	1993	12.8%
	1994	16.7%
	1995	13.7%

Gynaecology

	No	(%)
	1917	27.80
Tubal ligation	924	48.2
Evacuations	539	28.1
Dilatation & Curretage	244	12.7
Ectopic pregnancy	65	3.30
EUA	58	3.02
Ovarian cystectomy	56	2.92
Total abdominal hysterectomy	31	1.6

Ear Nose and Throat

	No	(%)
	119	0.80
Tonsillectomy	68	57.14
Epistaxis (plugging & cautery)	30	25.21
Laryngoscopy	21	17.64

Ophthalmology

	No	(%)
	34	0.2
Subconjunctival injection	23	67.64
Enucleation	6	17.64
EUA	5	14.70

Other

	No	(%)
	15	0.1
Cones callipers	7	
CVP (central venous pressure)	8	
Thoracotomy (stab heart)	3	

Analysis of results

The width and depth of surgical and anaesthetic expertise required is highlighted by this detailed analysis. The use of ultrasound has improved our diagnostic possibilities enormously, we believe it is highly desirable for rural doctors to have ready access to this type of service. Gastroscopy has been of equal importance to us both diagnostically and therapeutically. Many of our procedures are performed under spinal or epidural analgesia unless specific contraindications exist. Needless to say surgical procedures can only be safely performed if anaesthetic skills are up to standard. Special note should be taken of the large number of orthopaedic patients handled – a much neglected speciality and recognised by us as such over many years. There are obviously some procedures which in many hospitals would normally be referred to a specialist hospital, however there remains a central core which should be performed at rural hospitals. It is in fact imperative that many of these be performed locally. There is undoubtedly a considerable morbidity and mortality associated with the transport of emergency patients over great distances. Transport difficulties are an ever present factor and in addition most patients for practical reasons prefer to be treated within their own communities. The new district health system will require that all patient referrals be paid for at local level. Local authorities will undoubtedly try to ensure that secondary health care skills in their respective areas are up to standard,

Medical schools should institute without delay a structured training programme for rural generalists.

Our traditional primary health care training is most inappropriate for rural practice.

Secondary health care is a reality in rural practice and needs to be recognised.

Procedural skills

resulting in considerable savings. This in itself should provide a great impetus to the appropriate training of rural practitioners. It should be emphasised that problems regarding rural doctor recruitment and training are being encountered in many other countries.

Conclusion

A structured training programme for rural generalists should be instituted without delay. For too long rural doctors have had to conduct their own training programmes as they deem fit.

Family practice departments train generalists predominantly in primary health care and that curriculum prepares them for only a proportion of what is presented to and expected of them in rural towns and hospitals.

The grand total statistics of 20 312 procedural interventions required at a 200 bedded hospital over a three year period clearly indicates that traditional primary health care training for rural practitioners as it exists at present is most inappropriate. The statistic also clearly indicates that secondary health

care is a reality and needs to be recognised as such. One should bear in mind that the majority of the population in South Africa reside in rural areas and that more anaesthetic and surgical procedures are being performed by generalists rather than specialists in this country. Rural practitioner training has been highlighted and emphasised by many here in South Africa and abroad, both at congresses and in medical journals. One trusts that it will not be long before a structured four year training programme is instituted in this country.

I wish to thank my colleagues Drs Vernon Brown, Jerome Bosman, Malcolm Rivett, Brett Craig, Jan Hill, Jonathan Cornell and Rob Wermuth for their wonderful co-operation and endeavour, also our faithful and ever smiling theatre staff. Special thanks to Dr Rob Wermuth, Superintendent of Kokstad Hospital for permission to publish.

References

1. Hill PH. Procedural skills in rural practice – a practice profile. SA Fam Pract 1995;16(10):674-7.

Training in Anaesthetic and surgical skills is urgently needed.

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