eReferral – using ICT to improve patient care in a major health service

Rosamund Green[a], Phil Joyce[b], Mark Arnold[c]

[a] *Health Information Services, Barwon Health, Geelong, Australia*

[b] *School of Information and Communication Technologies, Swinburne University of Technology, Melbourne, Australia*

[c] *Nursing Services, Barwon Health, Geelong, Australia*

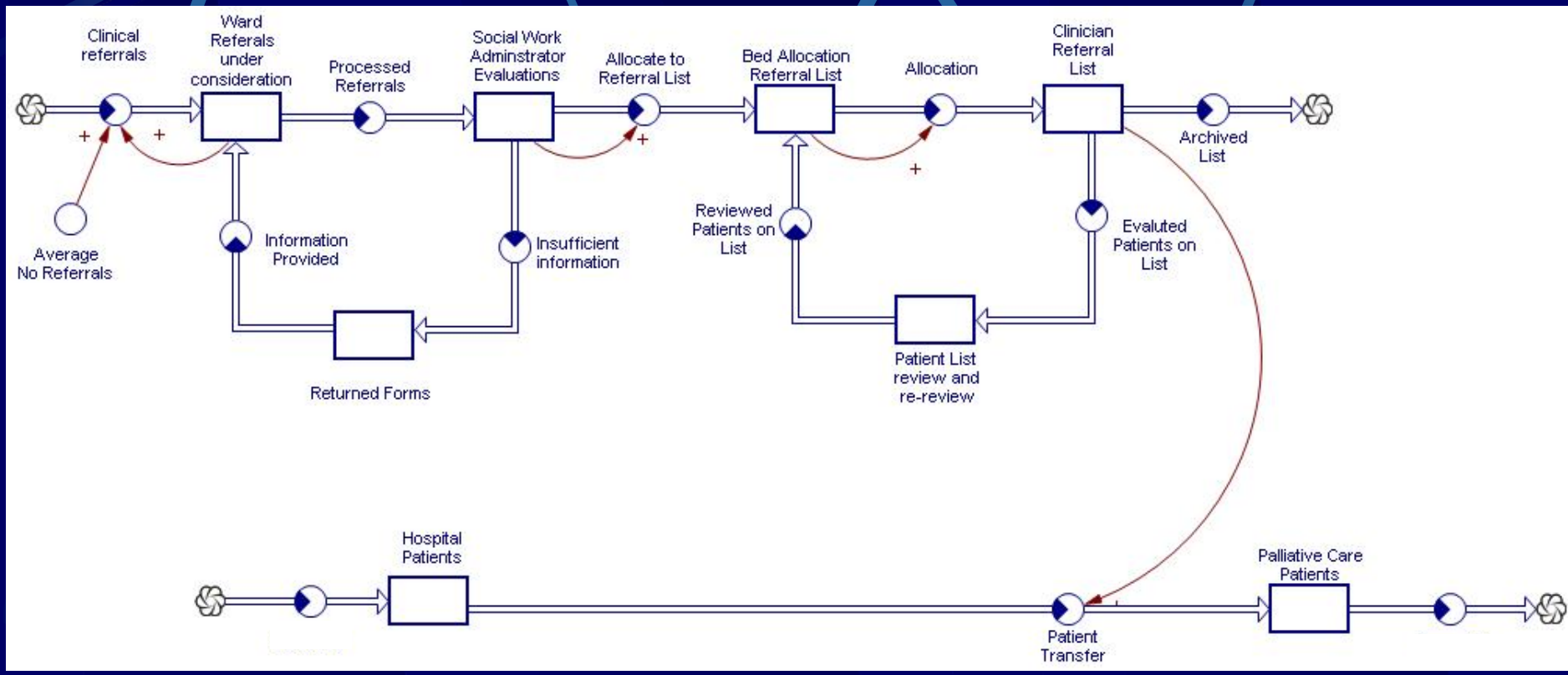
Introduction

- Patient movement an example of supply chain.
- For success processes: agile, adaptable and aligned.
- In-house flexible software supports redesign of process.
- Change management integral to combat “that’s how we’ve always done it”.

Evolution of a Process vs Design

- Evolution of a paper based process.
  - Redundant steps.
  - Out of date data.
  - Slow knowledge transfer.
- Design of an ICT process.
  - Facilitates evaluation of data flow.

Referral to Sub Acute Care



Advantages of ICT approach for Clinicians

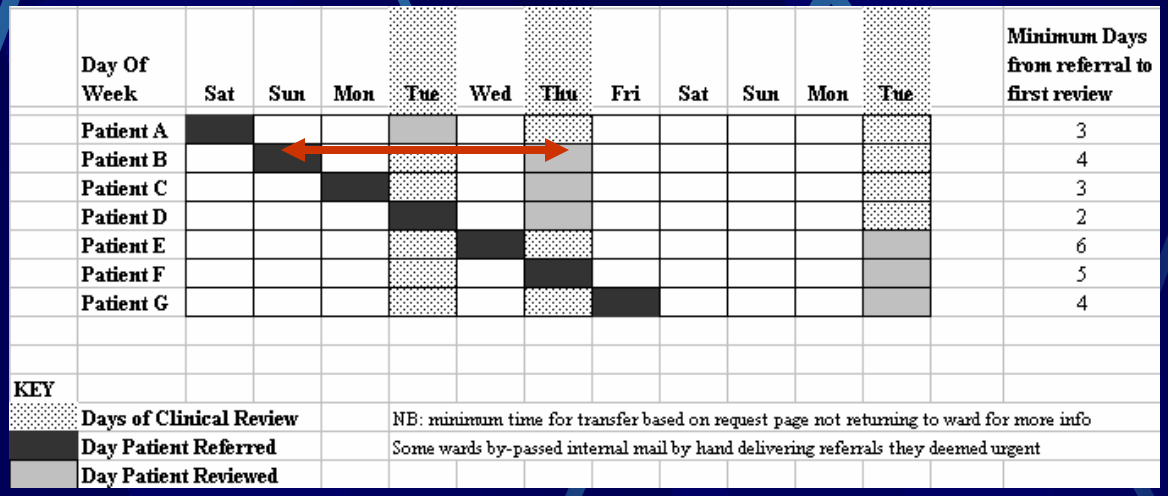
- Reports available at any computer.
- Data up to date.
  - Changing clinical condition .
  - Ward and bed location.
- Referrals available real time, not waiting for triage by social work.
- Patients seen sooner & referred for appropriate treatment.

Advantages of ICT approach for Patients

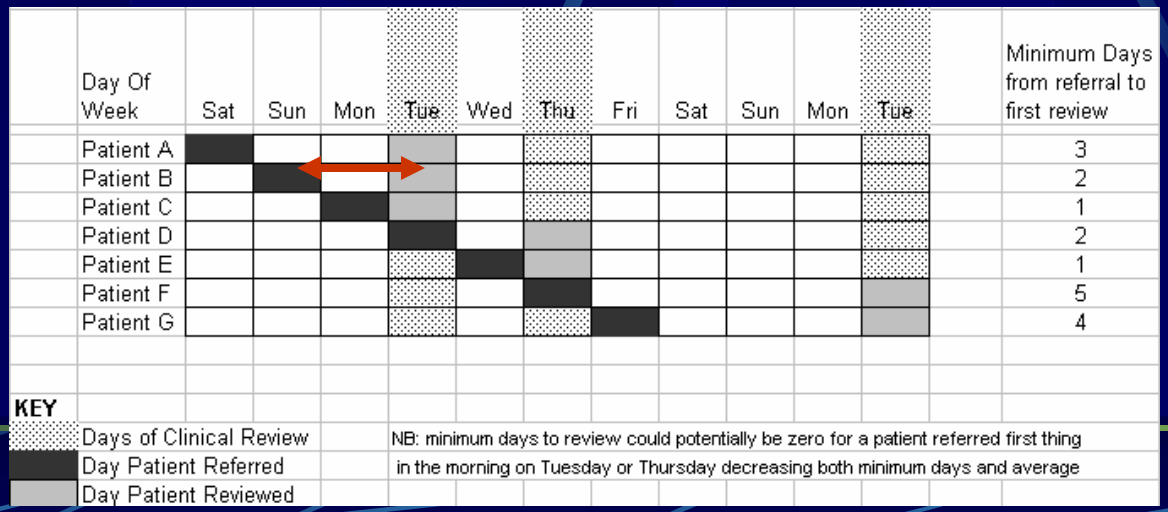
- Clinical decisions made in a timely and accurate manner.
- Provision of wider range of data facilitates a more accurate clinical decision.
- Appropriate clinician able to spend more time with appropriate patients.

Minimum Time from Referral to Clinician review

Paper Based



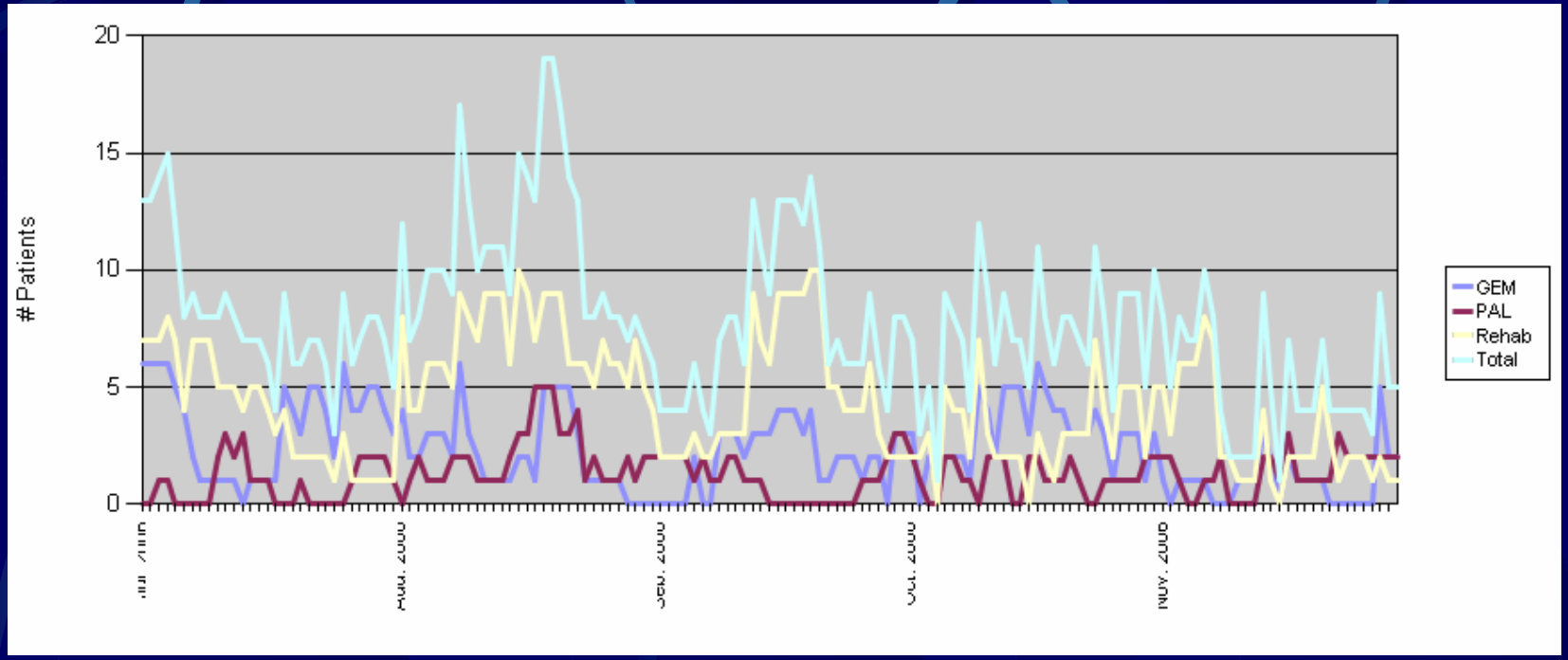
ICT



Analysis "Mythbusters"

- Number of patients waiting for transfer to Sub Acute traditionally derived at bed meeting.
- ICT removes subjectivity.
- ICT displays trends.
- ICT facilitates accurate decision making.

Referrals to Sub Acute by type of care



KPI Internal vs ICT Approach

Referral to Review	Paper Based Internal Mail	ICT Approach
Minimum Days to Review	2	1
Average Minimum Days	3.9	2.6

Conclusion

- ICT provides a clinical advantage for referrals between care types.
- Change management vital to success.
- Top level clinical and administrative support.
- Users see new process as an improvement as information instantly available.

References

1.Geelong CoG. Population by Suburb and Township in the Geelong Region, 2001 Census. 2006.
2.Lee HL The triple-A supply chain. Harvard Business Review. 2004 Oct;82(10):102-12.
3.Natarajan RN. Transferring best practices to healthcare: opportunities and challenges. The TQM Magazine. 2006;18(6):572-82.
4.Lærum H, Karlsen TH, Faxvaag A. Effects of Scanning and Eliminating Paper-based Medical Records on Hospital Physicians' Clinical Work Practice. J Am Med Inform Assoc. 2003;10(6):588–95.
5.Doolan DF BD, James BC. . The Use of Computers for Clinical Care: A Case Series of Advanced U.S. Sites. J Am Med Inform Assoc. 2003 Jan-Feb;10(1):94-107.
6.Wilson L, Greaves N. Why we need an NHS culture change to implement ICT change successfully and to give people modernised healthcare services. Br J Healthcare Comput Info Manage 2002;19(8):29–30.

Acknowledgement

Dr Lucy Cuddihy Executive Director of Nursing.
Mr. Paul Cohen, Executive Director Information Services,.

Contact Details

Rosamund Green
Barwon Health
Geelong Victoria Australia
rosamund@barwonhealth.org.au