Coping with information silos: An examination of the medication management process in residential aged care facilities (RACFs)

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Outline

- Background Concepts
- Study Aims
- Methodological Approach
- Key Findings
- Discussion

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Information Silos

- An information silo represents a data system that does not have the capacity to exchange data with other similar systems [10]

- Have been identified as the primary reason for fragmentation of care and lack of service coordination, which compromises the quality and safety of the delivered care

Medication Management in RACFs

- Effectiveness of medication management processes is a major concern for safety of care delivery in RACFs [1,2]

- Gaps in information exchange between members of the health care team are a prime source of medication errors, some resulting in serious adverse outcomes including hospital admissions and even death [2,6,7]

- Optimisation of information exchange processes requires an understanding of how the process stakeholders these gaps as part of their normal work practices
Aim(s)

- Identify the information silos that exist in the execution of RACF medication management process

- Examine how geographically dispersed stakeholders (doctors, community pharmacists and RACF staff) cope with the existing information silos
Methods

Setting
- Three medium sized RACFs located in Sydney, Australia
- Community Pharmacy, main supplier for all RACFs

Qualitative Research Design
- Semi-structured interviews (n = 23; avg. duration 25 minutes)
- Non-participant field observations (n = 89 hours)
- Artefact analysis
- Thematic content analysis [11]
- Member checking of results occurred through follow up interviews with site managers, quality team manager and pharmacy staff
Findings: During Prescribing

- Onsite (At RACFs)
- Offsite: Requiring consultation with doctors on the telephone
Findings: During Ordering, Dispensing and Packing

At the Pharmacy: Staff members were often identified struggling to resolve information mismatch across four silos.
Findings: During Ordering, Dispensing and Packing

At the Pharmacy: Packing staff maintained manual stock order list while packing the Webster Packs
Findings: During Administration and Monitoring

At the RACFs: Weekly Webster Check Process
Findings: During Administration and Monitoring

- Administration records spread across multiple signing sheets, (regular packed medication, non-packed medication, PRNs, Warfarin and short-term medications)

- Monitoring residents’ medications also relied on information across heterogeneous artefacts
Discussion

- Study provide insights into how information silos can impact on aspects of care delivery and resident safety in RACFs

- Redundancy of information can have both negative and positive impacts on the robustness of the process
  - Increases the risk of transcription errors, reduces process efficiency and limits the referential integrity of the information
  - Provides benefits by increasing checkpoints, providing information back-up and increasing system resilience[14,16].

- Challenge is to implement adequate information integration models which can select and exchange relevant information from this web of data in useful format
Discussion

- Implementation of commercial software without the appropriate customisation and integration needed to align it with collaborative work processes fails to address the issues of information silos and fragmentation.

- Vital to engage representatives from all professional groups involved in streamlining the design and navigation of information which supports medication management.
Thank you!

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