

Complex Care Management Medicines Optimisation

Co-Authors: Brown L, Gitonga N (Complex Care Pharmacists) Contributor: Mayahi L (Clinical Pharmacology Consultant)
St George's Hospitals NHS Foundation Trust

AIM

- The 'NHS five year forward view' (2014) emphasised the need for integrated out-of-hospital care and co-ordination across care boundaries.¹
- Within Wandsworth, South West London, the Complex Care Management (CCM) team offers an innovative service incorporating health, social care and voluntary services to prevent hospital admissions (diagram 1).
- Four locality hubs with links to hospital and community services have been set up.



Diagram 1: The core and wider MDT involved in the care of Complex Care patients in each locality

- The most complex patients and frequent hospital attendees are admitted for CCM (diagram 2).

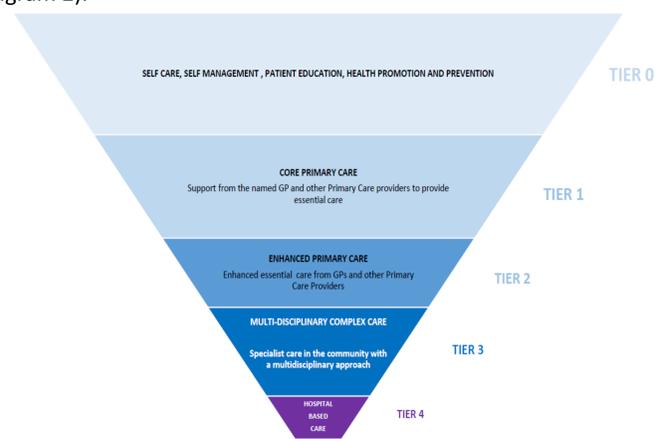


Diagram 2: Tiers of out of hospital care through which patients flow within the locality hubs

- CCM pharmacists support medication optimisation and offer pharmaceutical support; including medication reconciliation, transfer of medication care plans, assessing efficacy and safety and reviewing patients' preference and adherence (diagram 3).



Diagram 3: Service outline for CCM Pharmacists

METHOD

- Data was collected over 15 months to assess the value of the pharmacists' activity.
- Two models were used to score the interventions with associated cost avoidances (table 1):
 - NHS Croydon RiO scoring tool² measures the likelihood of the intervention preventing a hospital admission.
 - The King's contribution model³ assesses the clinical impact to the patient if the contribution had not occurred.
- Interventions were peer reviewed with senior pharmacists and a Clinical Pharmacologist consultant to ensure agreement and consistency.

Table 1: Models used to score the interventions

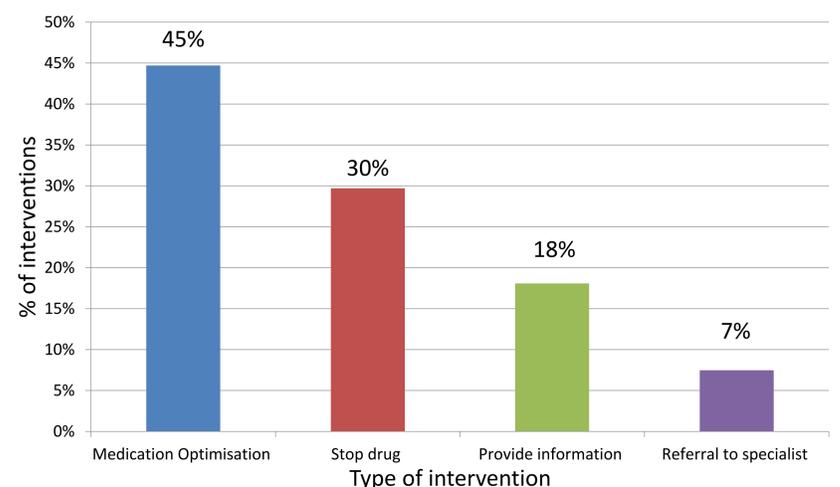
RiO Score	
Score	Likelihood of preventing hospital admission
Level 1	No likelihood
Level 2	Possible
Level 3	Likely
King's Pharmacy Clinical Contributions	
0	Leads or could lead, to an undesirable outcome /pharmacist's actions were inappropriate.
I	Good practice. No harm or clinical benefit to the patient
II	Minor benefit to patient care OR made treatment easier OR prevented an incident of minimal harm OR an error/incident which could have required extra observation
III	Most Level II contributions involving high-risk medication. If the high-risk medication is changed to make treatment more logical, or for staff convenience or ease, this is a level II contribution.
IV	Prevented an incident that could have potentially led to reversible organ failure, harm or increased level of care (i.e. readmission into hospital or from L1 to L2 or L2 to L3)
V	Prevented an incident that could have resulted in a life or death situation, permanent organ damage or severe harm, OR an error which could have potentially caused major permanent harm

*Re-admission – If re-admission is considered the most likely outcome, the minimum level assigned is IV

RESULTS

- Approximately 2000 clinical interventions classified as: optimising the medicine 855 (45%), stopping the medicine 568 (30%), provision of medicine information 346 (18%) and referral to another clinical specialist 143 (7%). See Chart 1.
- The NHS Croydon RiO scoring reports 284 (15%) and the King's Pharmacy Contribution reports 123 (6.4%) of the interventions prevented a hospital admission.
- Information provision aided medicines reconciliation and post-discharge discrepancies were identified and resolved on transfer across care settings.
- Recommendations according to national and local guidelines, monitoring requirements and carer and other health care professionals' education were provided.

Chart 1: Type of Clinical Contributions from Nov'15 to Jan'17



- The two models report an estimated cost avoidance of £975k (NHS Croydon RiO model) and £304k (King's model).
- Both costing models have limitations. They have not been validated and additionally, assigned monetary values for the King's model were from 2009 and likely to have changed to date.
- The varying costs can be attributed to the different settings the models were designed for; King's relevant to hospital cost avoidances and RiO scoring to community. As we were bridging this gap it was decided to calculate using both.
- The medicine acquisition cost savings from the pharmacists stopping medicines has made savings of £47k. The de-prescribing and rationalisation of medicines of the 463 prescriptions had clinical follow up within the MDT setting.

CONCLUSION

- Interventions to date prove the benefits of pharmacists in ensuring access to and quality of medicines optimisation for long term conditions, including preventing acute hospital admissions and readmissions after discharge.
- Pharmacists in a MDT setting play a vital role in information provision and recommended referrals. CCM pharmacists have been successful in ensuring seamless transfer of care plans across the interface.
- The importance of close links between hospital and community services has shown to be essential when coordinating the care for these complex patients.
- Next steps include expanding pharmacist practice through independent prescribing/ physical assessment and clinical reasoning skills.

REFERENCES

- NHS England. Five Year Forward View. October 2014. Available at: <https://www.england.nhs.uk/wp-content/uploads/2014/10/5yfv-web.pdf> [Accessed 3/7/17]
- NHS Croydon CCG Medicines Optimisation Team (2012). *NHS Croydon CCG – Capturing and Analysing Clinical Interventions*.
- King's College Hospital NHS Foundation Trust (2015). *Pharmacy Clinical Contributions severity rating scale for potential patient outcome*.