

<b>Supplementary appendix 1 Characteristics of study wards and observations</b>		
<b>Study wards</b>	<b>Medication systems and administration processes</b>	<b>Observations</b>
<b>Ward 1</b> Cardiac medical ward	The system comprised of electronic prescribing and eMAR paired with BCMA. Medications for the next 24 hours were dispensed in the COW by a night shift nurse. Roles to update any changes in dispensed medications during the shift, or to any newly admitted patients, were not defined. One nurse administered medications for up to five patients during the morning and nine patients during the evening rounds.	Two observers collected data individually at least one morning or evening medication round during two five-day periods from 30 October to 22 November 2019.
<b>Ward 2</b> Intensive geriatric ward	The system comprised of electronic prescribing and eMAR paired with BCMA. After the morning medication round the nurse dispensed medications in the COW for the next 24 hours and one nurse in each shift was responsible to update changes in medications or to dispense medications to any newly admitted patients. One nurse administered medications for up to nine patients during the morning and 13 patients during the evening rounds.	Two observers collected data individually at least one morning or evening medication round during two five-day periods from 6-16 January 2020.
Abbreviations: COW-computer on wheels; eMAR- electronic Medication Administration Record; BCMA- Barcode medication administration;		