IMPLEMENTATION AND EVALUATION OF ELECTRONIC MEDICAL ORDERS FOR
GOALS OF CARE AND END OF LIFE

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Purpose. Calgary Health zone is a pioneer in introducing goals of care designation both in paper
and electronic form. Our purpose was to evaluate the level, trends and determinants of these
medical orders.

Patients and Methods. We examined electronically recorded medical orders for goals of care at end
of life for adults admitted to acute care settings between December 2008 and December 2014.
Evaluation of determinants required patient's DOB, gender, admission and discharge dates,
location, attending physician, electronic order start and stop dates. The physician's attending group
we used to classify the patients into 5 groups by specialization: medicine, surgery, psychiatry,
obstetrics and other.

Results. We analyzed 525,000 electronic GCD records. The percentage of patients with an
electronic order varied from 54% in 2009 to 81% in 2014. The percentage of patients with medical
and comfort care orders (excluding resuscitation) increased from 12% to 14%. More than 60% of
patients had only one order during the study period. The intervals between the orders varied from
several hours to more than a year. Per encounter, more than 40% of orders had duration less than 1
day. The main determinants for the percentage of patients with an order were patient's age at
admission and the presence of a physician order set (of which these medical orders were
automatically included). Order sets increased documentation of goals of care from 64% in 2012 to
81% in 2014 in selected settings. For individuals below 40 presence of orders varied from 65%
increasing to more than 90% for ages over 90.

Conclusion. Electronic orders and order sets have been successfully implemented in a large health
region. Advanced age is a significant determinant in the documentation of medical orders
concerning goals of care. The inclusion of goals of care within an order set leads to increased use
without documentation of contributory discussions warranting further research.