THE CHEMICAL COMPATIBILITY AND STABILITY OF
DRUG COMBINATIONS ADMINISTERED BY CONTINUOUS
SUBCUTANEOUS INFUSIONS USED IN END OF LIFE
CARE

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10.1136/bmjspcare-2016-001204.18

Introduction In 2007, the National Patient Safety Agency recom-
mended that healthcare staff need to have full technical
information about compatibility of commonly used mixtures
used in specialist areas only (National Patient Safety Agency
2007). In 2008, the Commission on Human Medicine (CHM)
recommended that research should be commissioned to
develop authoritative national advice on mixing of medicines
to encompass compatibility and stability data (Commission on
Human Medicines, 2008).

In the UK, a continuous subcutaneous infusion (CSCI) is
considered to be the preferred method of drug administration
to maintain symptom management at the end of life. Despite
this common practice, compatibility data are lacking. Analysis
of national practice identified commonly used drug combina-
tions administered by CSCI that were included in this study.

Aims/objectives To determine the chemical compatibility/stabi-
licity of a total of 40 commonly encountered drug combinations.
A CME T34 syringe pump was used to simulate infusion of
the syringe preparation over a 24 hour period. The combina-
tions were analysed by High Performance Liquid Chromatog-
raphy-Diode Array Detection (HPLC-DAD).

Results Thirty combinations were identified as compatible by
HPLC-DAD. These combinations also remained clear and free
from visible particulate matter and the pH remained constant
over the monitored period. Four combinations will require
additional analysis as variances were detected during the test-
ing procedure.
Conclusion This research is the first step towards providing technical information required by healthcare staff for the mixing of injectable medicines in the same syringe.

REFERENCES