

OPAT is generally delivered in one of four settings: infusion centers, nursing homes, at home with skilled nursing assistance, or at home with self-administered therapy” Bhavan et al (2015).

Abstract:

BACKGROUND: Outpatient parenteral antimicrobial therapy (OPAT) is accepted as safe and effective for medically stable patients to complete intravenous (IV) antibiotics in an outpatient setting. Since, however, uninsured patients in the United States generally cannot afford OPAT, safety-net hospitals are often burdened with long hospitalizations purely to infuse antibiotics, occupying beds that could be used for patients requiring more intensive services.

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OPAT is generally delivered in one of four settings: infusion centers, nursing homes, at home with skilled nursing assistance, or at home with self-administered therapy. The first three-termed healthcare-administered OPAT (H-OPAT)-are most commonly used in the United States by patients with insurance funding. The fourth-self-administered OPAT (S-OPAT)-is relatively uncommon, with the few published studies having been conducted in the United Kingdom. With multidisciplinary planning, we established an S-OPAT clinic in 2009 to shift care of selected uninsured patients safely to self-administration of their IV antibiotics at home. We undertook this study to determine whether the low-income mostly non-English-speaking patients in our S-OPAT program could administer their own IV antimicrobials at home with outcomes as good as, or better than, those receiving H-OPAT.

METHODS AND FINDINGS: Parkland Hospital is a safety-net hospital serving Dallas County, Texas. From 1 January 2009 to 14 October 2013, all uninsured patients meeting criteria were enrolled in S-OPAT, while insured patients were discharged to H-OPAT settings. The S-OPAT patients were trained through multilingual instruction to self-administer IV antimicrobials by gravity, tested for competency before discharge, and thereafter followed at designated intervals in the S-OPAT outpatient clinic for IV access care, laboratory monitoring, and physician follow-up. The primary outcome was 30-d all-cause readmission, and the secondary outcome was 1-y all-cause mortality. The study was adequately powered for readmission but not for mortality. Clinical, sociodemographic, and

outcome data were collected from the Parkland Hospital electronic medical records and the US census, constituting a historical prospective cohort study. We used multivariable logistic regression to develop a propensity score predicting S-OPAT versus H-OPAT group membership from covariates. We then estimated the effect of S-OPAT versus H-OPAT on the two outcomes using multivariable proportional hazards regression, controlling for selection bias and confounding with the propensity score and covariates. Of the 1,168 patients discharged to receive OPAT, 944 (81%) were managed in the S-OPAT program and 224 (19%) by H-OPAT services. In multivariable proportional hazards regression models controlling for confounding and selection bias, the 30-d readmission rate was 47% lower in the S-OPAT group (adjusted hazard ratio, 0.53; 95% CI 0.35-0.81; $p = 0.003$), and the 1-y mortality rate did not differ significantly between the groups (aHR, 0.86; 95% CI 0.37-2.00; $p = 0.73$). The S-OPAT program shifted a median 26 d of inpatient infusion per patient to the outpatient setting, avoiding 27,666 inpatient days. The main limitation of this observational study—the potential bias from the difference in healthcare funding status of the groups—was addressed by propensity score modeling.

CONCLUSIONS: S-OPAT was associated with similar or better clinical outcomes than H-OPAT. S-OPAT may be an acceptable model of treatment for uninsured, medically stable patients to complete extended courses of IV antimicrobials at home.

[Full Text](#)

Reference:

Bhavan, K.P., Brown, L.S. and Haley, R.W. (2015) Self-Administered Outpatient Antimicrobial Infusion by Uninsured Patients Discharged from a Safety-Net Hospital: A Propensity-Score-Balanced Retrospective Cohort Study. 12(12), p.e1001922.

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