The Labor Market for Direct Care Workers: An Analysis of Employment Spells

EXTENDED ABSTRACT

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1. Introduction

As the baby boom cohort nears retirement age, the question of how to provide necessary health care and personal services to a growing elderly population has become an immediate policy problem in most Western countries. Although very few individuals over the age of 65 in the United States reside in nursing facilities, almost 16 percent do receive some form of long term care and the need for care increases dramatically with age (Green Book 2004). Given that much of the need for care takes the form of assistance with activities of daily living such as eating and grooming, an aging population is likely to put just as much strain on the market for direct care workers like nursing and home health aides as it will on markets for hospital care, registered nurses and prescription drugs.

In fact, the market for care workers is already showing signs of this strain. In a recent national survey (PHI 2002), 37 of 43 states reported serious shortages of direct care workers. In the absence of wage increases, dramatic shifts in patterns of occupational choice or policy initiatives, these shortages are likely only to get worse; direct care jobs are projected to grow at a much higher rate than overall employment through 2012 (Wright 2005). Additionally, state-level studies of turnover among care workers report annual rates that range from 25 to well over 100 percent (Wright 2005) and high levels of turnover have been shown to adversely affect patient outcomes in nursing home settings (Barry et al. 2005).

The goal of this paper is to provide the first comprehensive analysis of turnover among direct care workers using a large, nationally-representative dataset and appropriate econometric methods. While the academic literatures in health services and economics have devoted a considerable amount of attention to shortages and high turnover in the market for Registered Nurses (RNs) (see Antonazzo 2003 for a review of this literature), similar issues in the labor market for care workers have largely been neglected except by advocacy groups. And while the literature on RNs has a great to deal to contribute toward formulating a study of direct care worker turnover, the market for direct care workers deserves independent study because these workers are, on average, a much less advantaged population from a sociodemographic point of view, with average earnings near the poverty line. They are likely to face employment opportunities, family constraints and public policy incentives that differ significantly from those faced by RNs.

2. Data and Methods

The data used in this analysis come from the 1996 Survey of Income and Program Participation (SIPP), a panel study that follows a nationally-representative sample of Americans from early 1996 until early 2000. Respondents are surveyed every four months and are asked at each interview to provide month-level employment, family structure and other information about the current month as well as the three preceding months. These four-month reference periods are called waves. For individuals who participate in the survey four the entire four years (77%), this results in a 48-month panel of continuous demographic and employment data for more than 37,000 adults. Although this relatively short panel has the disadvantage[1] of not completely capturing employment spells of more than four years, by providing monthly data it allows us to measure the characteristics of shorter job spells for lower-skilled women (for whom the median length is 15 months) with a much greater degree of accuracy.

We create two measures of employment spells, exploiting the fact that the SIPP asks a comprehensive set of employment questions at every wave of data collection and for every month within a wave. Employed individuals are given identification numbers that are unique to each employer that they have; changes in this number from month to month allow us to track job changes. Continuity from month-to-month in the employer ID is our first measure of job spell lengths. For each job held, a start date is also collected and an end date is recorded in the month that the individual reports leaving the job. We calculate a second measure of job spell lengths using reported start and end dates. For spells that started and ended within the four-year period of the SIPP panel, the spell estimates by the two methods should be the same (and are, in practice, extremely close). However, because the second measure includes spells that began before the SIPP panel started, we will not be able to use that measure in models of employment duration that contain time-varying explanatory variables. The benefit of the second measure is that it provides a more accurate cross-sectional estimate of employment spells at a point in time. It also allows us to estimate the fraction of all employment spells that we can expect to observe (without censoring) during a four-year period for care workers.

Along with an employer ID and start and end dates for each job, the SIPP codes both industry and occupation group at the 3-digit level. We use the occupation code to identify direct

[1] This would be relative to an annual-observation panel data set like the Panel Study of Income Dynamics (PSID) or the National Longitudinal Survey of Youth (NLSY).

care workers as those belonging to the "nursing aide or orderly" and "health aide, not nursing" groups. The total number of care workers we identify in the panel is 786. The median spell of employment for a care worker, as measured by start and end date of job, is 17 months. Within the 4 year SIPP panel we will observe more than 75 percent of spells without censoring at the month-to-month level .

3. A Duration Model of Employment for Direct Care Workers

A. Determinants of Spell Length

Variations of a basic static economic model of labor supply would imply that a utility-maximizing decision about if or how much to work is a function of the following: the market wage being offered, other income in the household (from assets or a spouse's earnings), a person-specific opportunity cost of spending time away from home (as measured by the number and age of children in the household), fixed costs of working (including child care and transportation). It would also be important to include in any empirical model tax rates and, given that direct care workers' annual earnings range from $16,750 to $20,760, the value of any health or welfare benefits that might be lost with increased earnings.

The literature on labor supply of RNs is suggestive about the about the possible effects of these variables, particularly wages. There is some disagreement in the literature as to how much wages matter. Although Holmas (2002) argues that wage effects in many papers are underestimated because shift work controls were omitted, there is a sense among other authors (for example, Ahlburg 1996) that non-pecuniary job characteristics are as or more important than wages in driving labor supply for nurses. Although the SIPP data does not provide the optimal set of job characteristics for measuring such effect, it will be important to include all available information on firm size, fringe benefits and working hours in our model.

Given the public policy implications of high turnover and shortages in the market for direct care workers, we are also interested in measuring the effect of policy variables that are likely to influence the labor supply decisions of potential care workers. Some of these policies, such as the Earned Income Tax Credit (EITC), are work incentives that apply generally to the wage/skill group to which most direct care workers belong. Because the SIPP identifies state of residence for all but 5 states, and because a number of states implemented or expanded their own EITCs between 1996 and 2000, we will be able to gauge the effect of this tax-based wage

subsidy on the employment behavior of care workers. We will also consider the effect of state tax credits for child care.

A second set of policies is much more directly targeted at the direct care workforce. Currently 21 states have "wage pass-throughs" targeted at care workers imbedded in their Medicaid policies. These policies mandate that a certain fraction of state reimbursement for direct care provided to the elderly through Medicaid be directed at wages and benefits for the workers. Pass-throughs are intended to compensate for the fact that Medicaid payments to long term care are essentially prospective and do not encourage additional spending on care worker wages, even during a labor shortage. The effectiveness of wage pass-throughs at recruiting and retaining care workers has only been systematically analyzed at the state level, and the results have been mixed (HHS 2002). Our study will provide what we believe to be the first national-level analysis of the effectiveness of pass-throughs. We will also control more generally for the generosity of Medicaid coverage for long term care at the state level.

B. The Empirical Model

Using the employment spells that we have constructed using employer IDs during the 4-year SIPP panel, we will estimate discrete-time duration of the determinants of ending a spell of employment in a direct care work job. We have monthly data, but will also estimate the models at the 4-month level (or 12 observations per individual in the panel) because "seam bias", or reporting of employment or family structure changes only at new interviews (and not attributing them to intervening months) has been reported to be a problem in the SIPP. Econometrically, our analysis will account for censoring bias, unobserved individual-level heterogeneity and the potential endogeneity of market wages. Our goal is to identify the personal, family and job characteristics, as well as public policies, that are associated with less job turnover among direct care workers. Ideally, these results can be framed in a way that provides useful information to policymakers in designing and maintaining networks of long term care for the aging U.S. population.

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