



Determinants of Screening for Developmental Disabilities in Primary Care

Dr. Marjolaine M. Limbos, PhD & Dr. David P. Joyce, MD,
Department of Family Medicine, University of British Columbia, Canada

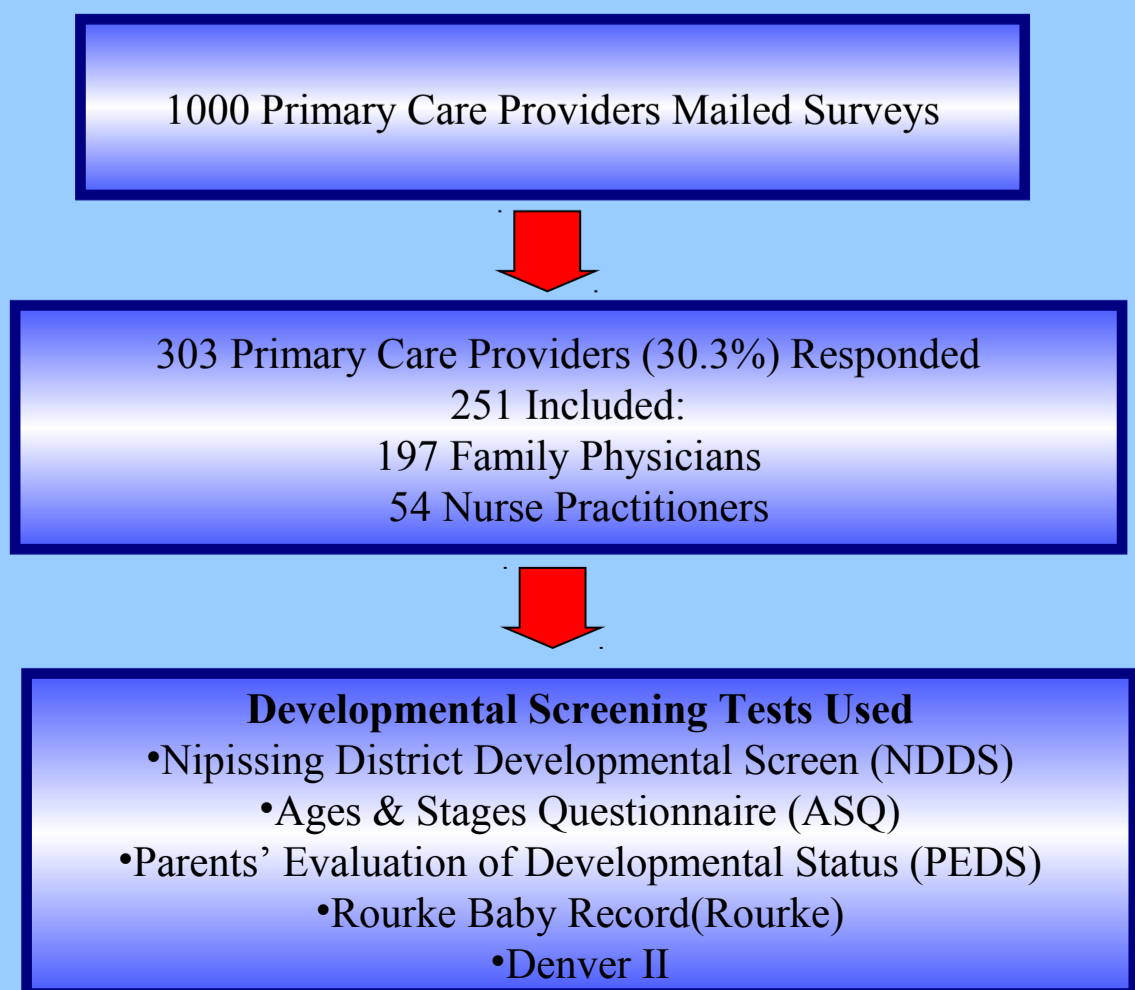
ABSTRACT

Recent guidelines recommend screening for developmental delays (DD) using standardized tests. Available evidence suggests that detection of DD without such tools is inaccurate. In Canada, little is known about current practices, knowledge, and barriers to screening by family physicians. A random survey of 1000 clinicians was conducted. Familiarity with the Nipissing District Developmental Screen (NDDS), Ages and Stages Questionnaire (ASQ), Parents' Evaluation of Developmental Status (PEDS), and the Modified Checklist for Autism in Toddlers (MCHAT) was examined. Attitudes, beliefs and barriers to screening were assessed by agreement with a number of statements. Logistic regression was used to determine predictors of successful screening. A total of 251 clinicians returned the survey. Less than half used the NDDS (36.7%) and a minority of clinicians were familiar with the ASQ (3.6%), PEDS (6.4%) and MCHAT (5.2%). The majority believed that interventions for DD were effective, but only half felt confident in caring for DD, and 40% felt there were insufficient resources. One quarter felt confident that they could identify DD without screening tools. The major barriers to screening identified were lack of: time (30%), familiarity with screening tools (26%), resources in the community (13%) and reimbursement (8%). Logistic regression revealed that male gender, payment by fee for service, and a belief that there was lack of sufficient reimbursement predicted failure to use standardized screening. **CONCLUSION:** The majority of family physicians do not use standardized DD screening tests, and certain physician and practice characteristics and physician beliefs can be attributed to this lack of screening. Further dissemination of guidelines and finding ways to address factors associated with use of standardized screening is needed to improve identification of DD.

INTRODUCTION

- Developmental delays are common, affecting up to 15% of children.
- Past research has indicated that identification of developmental delays without the use of standardized screening tests is inaccurate.
- As a result, the American Academy of Pediatrics and other authorities recommend regular screening of young children by their physician, using simple developmental screening tests.
- Past research in the US has demonstrated that a minority of pediatricians and family physicians use standardized developmental screening tools.
- In Canada, where the majority of pediatric primary care for children is provided by family physicians, little is known about developmental screening practices.
- The current research is aimed at studying the current practices, knowledge, attitudes and barriers to screening for developmental problems in children.
- It will further examine if there are certain demographic characteristics or physician characteristics, attitudes or beliefs that predict the use of standardized screening tests.

METHODS

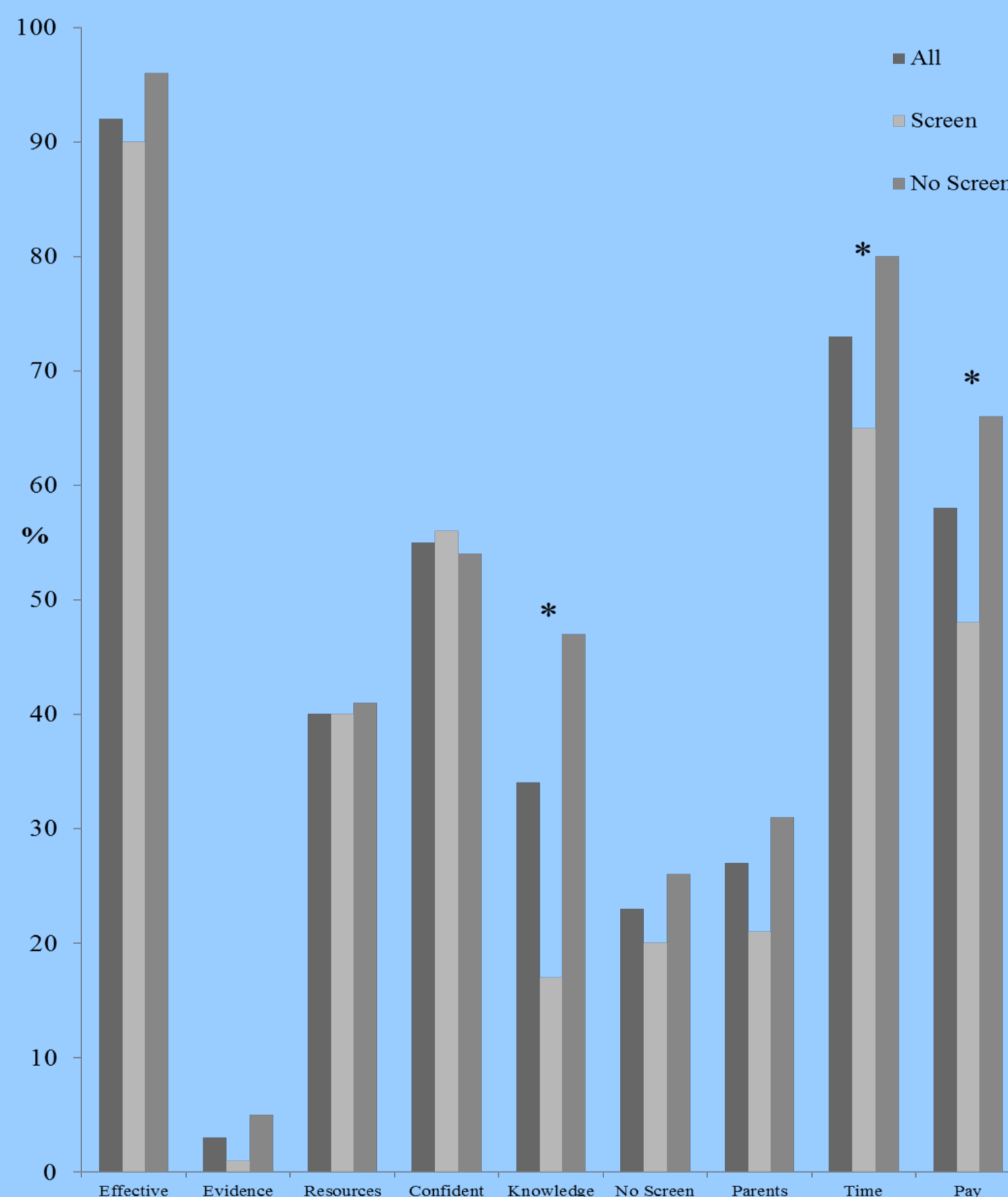


RESULTS

Table 1. Characteristics of Respondents and their Practices.

Physician Characteristics	All Providers n (%)	Practice Screening	No Screening	X ² , p value
Gender				
Male	102(42.3)	27 (25)	75(56.4)	.00
Female	139(57.7)	81(75)	58(43.6)	
Age				
<40 years	56(24.2)	21(20.6)	35(27.1)	.51
40-49 years	61(26.4)	28(27.5)	33(25.6)	
>50 years	114(49.4)	53(52)	61(47.3)	
Years in practice				
< 10	62(26.8)	28(28.6)	34(25.6)	.49
10-19	62(26.8)	29(29.6)	33(24.8)	
≥ 20	107(42.6)	41(41.8)	66(49.6)	
Practice Characteristics				
Community type				
Urban	77(30.7)	34(30.6)	43(30.7)	.39
Suburban	47(18.7)	16(14.4)	31(22.1)	
Rural	122(48.6)	58(52.3)	64(45.7)	
Other/cannot identify	5(2)	3(2.7)	2(1.4)	
Geographic location				
Ontario	167(69)	96(87.3)	71(53.8)	.00
British Columbia	75(31)	14(12.7)	61(46.2)	
Practice type				
Group	198(78.9)	88(80)	110(78.6)	.78
Solo	52(20.8)	22(20)	30(21.4)	
Practice affiliation				
Academic centre	11(4.4)	5(4.5)	6(4.3)	.00
Community health centre	60(23.9)	39(35.1)	21(15)	
None	180(71.7)	67(60.4)	113(80.7)	
Physician payment				
Fee for service	101(42.3)	27(25.7)	74(55.2)	.00
Other‡	138(57.7)	78(74.3)	60(44.8)	
Practice Volume (Patients/wk)				
< 100	107(46.1)	60(57.1)	47(37.0)	.02
100-150	98(42.2)	34(32.4)	64(50.4)	
151-200	19(8.2)	8(7.6)	11(8.7)	
>200	8(3.4)	3(2.9)	5(3.9)	

Figure 2. Attitudes, Knowledge and Beliefs about Screening.



SURVEY

Attitudes/Knowledge/Barriers

Early intervention services for children ages birth to 5 years with developmental delays are effective .	During a typical well baby/child visit, there is a lack of time to perform developmental screening.
There are sufficient resources in my community to provide services to children with developmental delay or disability.	I have the clinical expertise to identify most children with developmental delays in my practice without the use of a formal screening instrument .
Once I identify developmental delays in a child, I feel confident in how to care for the child , including managing consultations and referrals for therapy.	There is a lack of sufficient reimbursement for well baby/child visits to cover time spent on developmental screening.
I do not routinely use formal developmental screening instruments in my practice because there is insufficient evidence to support their use.	Eliciting parental concerns about a child's development is a good substitute for formal developmental screening.
I do not routinely use formal developmental screening instruments in my practice because I have insufficient knowledge or training in their use.	

Figure 1. Use of Standardized Developmental Screening.

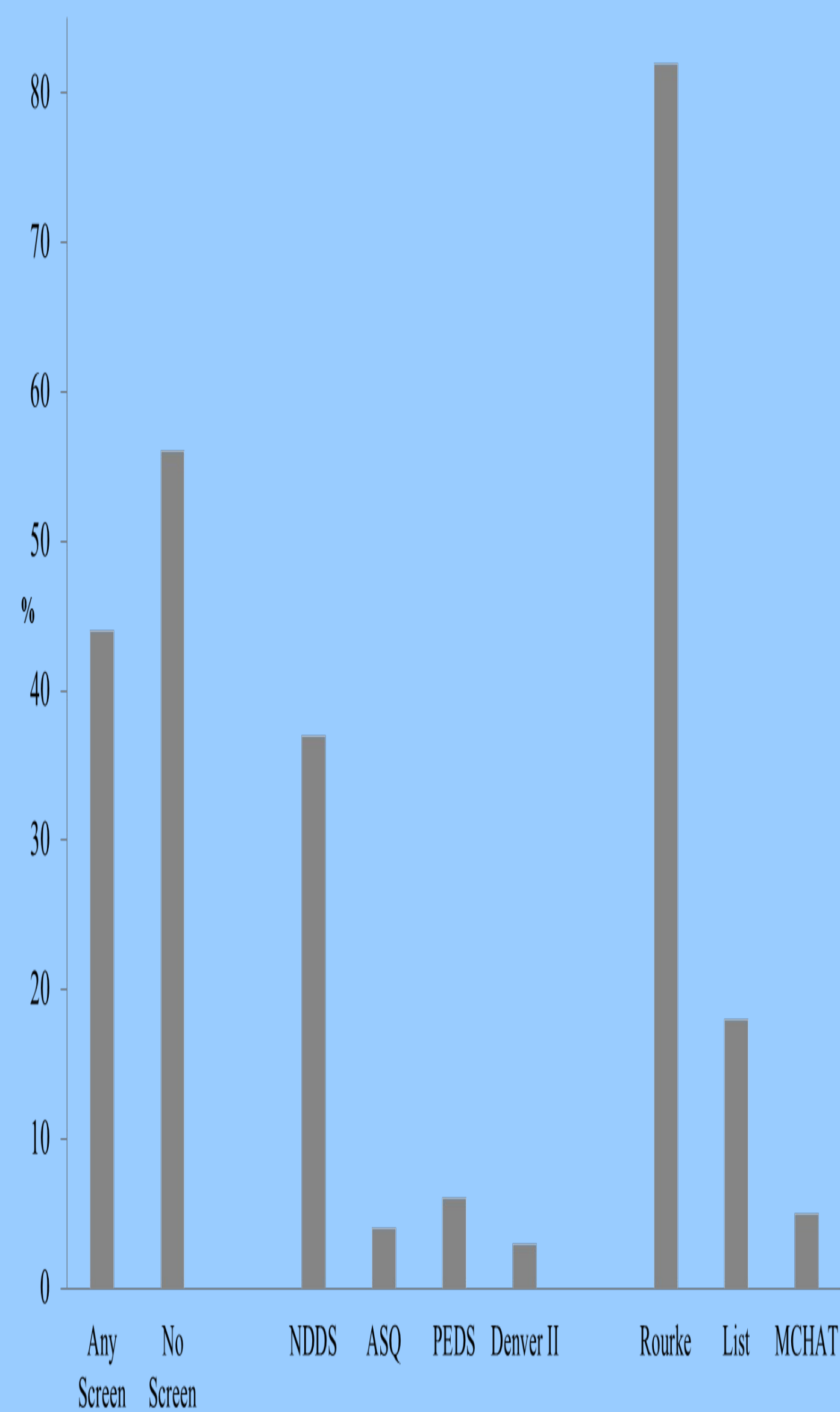


Table 2. Predictors of Practicing Standardized Screening

Variables	Significance	Odds Ratio	Odds Ratio (95% CI) Backward Stepwise
Model 3			
Gender	.00	3.30	3.36(1.78-6.25)*
Payment	.00	3.20	3.38(1.81-6.30)*
Lack of Reimbursement‡	.53	.82	0.25(.13-.50)*
Insufficient Knowledge	.00	.25	

DISCUSSION

- Less than half of providers used standardized developmental screening.
- Of those, the majority used the NDDS, a test with little research on its validity for developmental screening.
- Very few providers were familiar with more well studied and validated standardized tests, the ASQ, PEDS and MCHAT.
- While use of the Rourke was high, it has ever been validated for use as a developmental screening tool, and use may have been for other aspects of well child care (e.g., immunization, growth).
- The main predictors of standardized screening were female gender, payment other than fee for service, and the belief that there was lack of sufficient reimbursement for screening.
- Dissemination of guidelines for standardized developmental screening tests is needed in Canada to increase the frequency of use of valid and reliable screening tests.
- Addressing reimbursement levels for developmental screening may be a potential opportunity for increasing developmental screening.
- Because of the high frequency of use of the Rourke, further research on validity, and on ways to improve it's validity as a developmental screening tools is a priority.