

System struggles and substitutes: A qualitative study of general practitioner and psychiatrist experiences of prescribing antipsychotics to children and adolescents

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Abstract

There are significant controversies regarding rising antipsychotic prescription trends in children and adolescents. Many pharmacoepidemiology trend studies have been published, and interpretations of these data are helpful in explaining what is happening in prescribing practices, but not why these patterns exist. There is a lack of qualitative data in this area, and the experience of prescribing antipsychotics to children and adolescents has not been adequately researched. We conducted a qualitative study using an interpretive phenomenological analysis of physicians' experiences of antipsychotic prescribing to children and adolescents. Prescribers participated in individual interviews and a focus group. We used a staged approach for data analysis of transcriptions. In all, 11 physicians including psychiatrists and general practitioners participated in our study. We identified themes related to *context, role and identity, and decision-making and filtering*. Struggles with health system gaps were significant leading to the use of antipsychotics as substitutes for other treatments. Physicians prescribed antipsychotics to youth for a range of indications and had significant concerns regarding adverse effects. Our results provide knowledge regarding the prescribers' experience of antipsychotics for children and adolescents. Important gaps exist within the health system that are creating opportunities for the initiation and continued use of these agents.

Keywords

antipsychotics, disruptive behavior disorders, physicians, children and adolescents

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Introduction

Antipsychotics are a mainstay of treatment for mental illnesses such as schizophrenia and bipolar disorder. Regulatory-approved indications for antipsychotics differ among various age groups and regions globally, including between the United States and Canada. In the United States, several second-generation antipsychotics have specific Food and Drug Administration (FDA)-approved pediatric indications, whereas in Canada this is limited to one agent. For example, in children and adolescents, risperidone received approval from the FDA in 2006 for irritability-related behaviors associated with autism (US Food and Drug Administration (US FDA), 2006) and in 2007 for schizophrenia (aged 13–17 years) and short-term treatment of mixed or manic episodes of bipolar I in children and adolescents (aged 10–17 years) (US FDA, 2007). Others are FDA approved for schizophrenia, bipolar mania, and irritability/aggression related to autistic disorder (Correll, Kratochvil, & March, 2011). In Canada, only aripiprazole is approved for use in people under the age of 18 years (Bristol-Myers Squibb Canada, 2011). Post-marketing pharmacoepidemiology studies characterize the “real-world” utilization, safety, and effectiveness trends of these agents. Prescribing practices characterized in many of these studies are considered outside of regulatory-approved indications or so-called off-label prescribing. Off-label usage is not unique to antipsychotics (Ogilvie, Eggleton, Senate Standing Committee on Social Affairs, Science and Technology, & Canadian Electronic Library, 2014), but this practice in populations such as the elderly (Briesacher, Tjia, Field, Peterson, & Gurwitz, 2013; Citrome, Kalsekar, Guo, Laubmeier, & Hebden, 2013; Hartung et al., 2013) and children (Alessi-Severini, Biscontri, Collins, Sareen, & Enns, 2012; Aparasu & Bhatara, 2005; Cooper, Hickson, Fuchs, Arbogast, & Ray, 2004; Cooper et al., 2006; Harrison-Woolrych, Garcia-Quiroga, Ashton, & Herbison, 2007; Murphy et al., 2013; Olfson, Blanco, Liu, Wang, & Correll, 2012; Patel et al., 2005; Patel, Crismon, & Shafer, 2006; Patel, Sanchez, Johnsrud, & Crismon, 2002; Pringsheim, Lam, & Patten, 2011; Rani, Murray, Byrne, & Wong, 2008; Ronsley et al., 2013; Zito et al., 2008; Zito et al., 2000; Zito, Safer, dosReis, & Riddle, 1998; Zito, Safer, Riddle, et al., 1998) has garnered significant attention due to the range of possible indications for use (e.g. disruptive behaviors, management of dementia-related behaviors, sleep disorders) and the potential increased risk of serious side effects. For children and adolescents, these prescribing practices, including noteworthy patterns of use for the management of disruptive behaviors (Penfold et al., 2013), are juxtaposed against questions regarding effectiveness and possible long-term side effects (Canadian Adverse Reaction Newsletter, 2012; Panagiotopoulos, Ronsley, Elbe, Davidson, & Smith, 2010; Pringsheim, Lam, Ching, & Patten, 2011; Seida et al., 2012). The available pharmacoepidemiological population-based studies of antipsychotic use in children and adolescents are helpful for describing patterns in antipsychotic prescribing and utilization, often through administrative health claims’ data linkages including variables specific to the patient (e.g. age, sex, diagnoses, health services utilization), the medication (e.g. name, dose, days supplied, formulation), and the prescriber (e.g. psychiatrist, general practitioner (GP)) (Penfold et al., 2013). However, we currently lack an understanding of the experiences and perceptions of prescribers, who are primarily physicians, in the clinical context regarding the circumstances and meaning attributed to the prescribing of antipsychotics for children and adolescents. Exploring these experiences through qualitative methodology is warranted. There is some qualitative research on young people’s experience of antipsychotics, including our recent work (Floersch, 2003; Floersch et al., 2009; Longhofer & Floersch, 2010; Murphy et al., 2015), but essentially none for prescribers. Findings from qualitative inquiry with prescribers as participants could serve to provide better understanding of practice, while also exploring their views regarding various challenges and opportunities within the mental health system, and provide knowledge to inform future directions in clinical practice, research, and policy development in this area. We therefore aimed to explore physicians’ experiences and perceptions of prescribing antipsychotics to children and adolescents.

Methods

Interpretive phenomenological analysis was chosen so that we could examine the lived experience within a particular situation/context (Benner, 1985; Smith, Flowers, & Larkin, 2009). Using interpretive phenomenological analysis allows for exploration of an individual's personal perceptions and accounts of events as opposed to attempting to produce an objective statement of the event itself (Smith et al., 2009). The process includes a "double hermeneutic" (Smith et al., 2009) or two-stage interpretation process, in which the researcher is making sense of the participant, who in turn makes sense of their own experience. The foundational tenets of interpretive phenomenological analysis are rooted in phenomenology, hermeneutics, and idiography (Smith et al., 2009).

Sample and recruitment procedures

We used purposeful (Smith et al., 2009) sampling to recruit physicians licensed to practice in our province who had prescribed antipsychotics in the last 2 years. In addition to advertising the study throughout professional networks, we used "opportunities" (Smith et al., 2009) based on the research teams' contacts and "snowballing" (Smith et al., 2009) in which participants suggested other potential participants to the interviewer. Prescribers were not limited to specialists such as child and adolescent psychiatrists given that provincial data supported that GPs do a substantial amount of antipsychotic prescribing to young people (Alessi-Severini et al., 2012; Murphy et al., 2013; Patten, Waheed, & Bresee, 2012; Ronsley et al., 2013). Interpretive phenomenological analysis studies often include an idiographic approach (Smith et al., 2009) and aim to build a detailed understanding of how a given person, in a given context, makes sense of a given phenomenon (Smith et al., 2009). Through the interview process, rich data are gathered, and we therefore aimed to recruit 10–15 physician participants. Potential participants were given the option of focus groups or interviews as we recognized scheduling is challenging for clinicians.

Compensation

All participants were paid a one-time honorarium for their participation.

Data collection and analysis

One individual conducted all interviews using a semi-structured interview guide (available upon request) that included questions such as "what is your experience with prescribing antipsychotic medications?" All encounters were recorded, transcribed, anonymized, and analyzed. The audio recordings were listened twice while checking for transcript accuracy. Given that there were less than 20 child and adolescent psychiatrists in the province at the time of the study, we also anonymized information regarding obvious and subtle nuances of the prescribers' place of work and also chose not to report information on gender. Data collection was terminated when data were determined to be rich and robust—in this case, following one focus group and six interviews. We followed a staged iterative and inductive analysis approach (Diekelmann, Allen, & Tanner, 1989; Smith et al., 2009; Smith & Osborn, 2008; Van Manen, 1989) as reported in our research with youth (Murphy et al., 2015). Briefly, in stage 1, transcripts were read individually at least twice as a whole in order to get a complete picture of the data, with the use of notations, initial observations, and reflections (Smith et al., 2009; Van Manen, 1989). In stage 2, we summarized each transcript and identified themes along with quotes to demonstrate support of themes to develop the narrative for individual participants. Themes were used to serve as the experiential structure of the phenomenon (Smith et al., 2009; Van Manen, 1989). We also used several techniques to facilitate identification

of themes within transcripts including, but not limited to, examining repetition, transitions in speech and topics, use of analogies or metaphors, linguistics, and apparent similarities in differences within the text. We met approximately twice-monthly following independent analysis of individual and the group of transcripts. When meeting, we discussed themes and their interpretations with the use of direct quotes to come to a consensus about themes (Diekelmann et al., 1989). We then independently reviewed and compared interpretations and supporting quotes for themes. In step 4, we met to examine relational themes present in all transcripts in order to examine particular and unique experiences by individuals and those shared experiences across multiple participants (Smith et al., 2009; Streubert & Carpenter, 2011). We worked to capture phrases that embodied the main thrust of the meaning of the themes for participants' experiences and our interpretation (Smith et al., 2009; Van Manen, 1989).

Participants were sent themes and findings for review and comment as a means for securing respondent-validation (member-checking). Participants were also contacted (if they consented) for knowledge translation (KT) sessions regarding the study. These sessions were used for feedback, member-checking, data triangulation, and validation of findings via multiple methods (Streubert & Carpenter, 2011). Credibility, dependability, and validity of findings were established by providing participants with opportunity to review findings (member-check) and the use of iterative analyses (Creswell & Miller, 2000; Krefting, 1991).

Ethical approvals

Ethics approval was obtained from the research ethics boards (REB) of Capital District Health Authority (file number 2010-1079) and the IWK Health Centre (file number 1004724), which have reciprocal ethical agreements with Dalhousie University's REB.

Findings

Interviews and the focus group were carried out between January and August 2010. We collected approximately 7 hours of audio (range: 41–81 minutes, median: 58 minutes, mode: 65 minutes) from 11 prescribers ($n=5$ one focus group; $n=6$ individual interviews). All the focus group participants characterized themselves as GPs with one having additional experience, training, and mentorship in psychiatric care. Most individual interviewees were child and adolescent psychiatrists ($n=4$), the remaining two identifying themselves as physicians with additional experience, training, or mentorship in psychiatric-related care.

Our main themes, which are linked, included *context, role and identity, and decision-making*.

Context

There were distinct differences in the physicians' experiences of prescribing antipsychotics depending on their actual or perceived context of practice within the overall health system. Our definition of context was in the broadest sense how participants described the culture in which they practiced, physical location (e.g. rural vs urban), health system resources and access, and other supports. Participants provided examples and interpretations of how fractures within the system and a perceived lack of infrastructure within the mental health system created barriers to timely access to appropriate resources by both families and GPs. By contrast, the psychiatrists perceived adequate resources within their local or immediate context of practice and environment. However, once extending beyond their local resources, they cited challenges within the broader mental health system and problems with wait-lists and the time to access psychiatric care. Psychiatrists empathized with

the plight of the public and other health care providers attempting to navigate among and transition between services from the community and progressing from general to specialist care:

Physician interviewee 6 (psychiatrist): . . . if you are a doctor, . . . a parent, or . . . a clinician in the community and you want your kid evaluated and treated for mental illness then you would go through [referral centre] . . . if it's not acute, you would have to wait over a year because there's like 1,000 patients waiting. And it's due to a combination of things . . . I think it is lack of resources and we are not very efficient. We're not structured properly to deal with, I think, the explosion of referrals.

The patient's level of acuity within various contexts was a major reason for prescription. For GPs, youth with floridly obvious or dangerous behaviors created the need and opportunity for antipsychotics. In such cases, the antipsychotics were referred to as "band-aids," mechanisms to "buy" families and youth time when behavioral problems were significant and access to other services was not available. One GP discussed his concerns for the use of these agents as "chemical leashes" for patients with developmental delay who were housed in various settings within the "system," again acknowledging that antipsychotics were used as a replacement for another treatment. The GPs discussed significant limitations in facilitating recovery without the availability of nonpharmacological supports for all illnesses, not just those that were psychotic disorders:

FGR (focus group

respondent) 3: I certainly don't feel any pressure to prescribe.

FGR2: No, but there's pressure to get. . .

FGR1: To get these folks treated, yes.

FGR4: . . .and seen in a timely manner. Right?

FGR5: Yes. Refer them off, I suppose.

FGR3: I don't know that so much in psychosis. I think those people are seen. . . .

FGR4: Seen fast. But you know what? Some of those kids that are maybe oppositional defiant or maybe they are ADD but maybe they are not ADD, maybe they are prodromal illness . . . There is not that bridge. Even though you want to be the bridge to refer somewhere, there is not that person who is going to pick up that referral on the other side in a timely fashion. And you're stuck with trying to manage this child.

FGR3: And what do you do in the meantime?

. . .

FGR2: And that is the pressure we have.

FGR3: And that is where I think maybe you're seeing a lot more GPs prescribing some low doses of say Seroquel® [quetiapine] or risperidone or those types of things.

FGR4: Because we have no other choice.

FGR5: To try to tie them over until they can see a psychiatrist or a neurologist or whoever you are referring them to.

FGR3: . . . And I mean the systems issue is huge . . . if you want to really create recovery, I mean we're talking about medications. And we talked a little bit about non-medication treatments . . . Yes, you are going to throw a drug at someone

. . . Because initially, you have to sort of rapidly get them to have some hopeful insight or at least help them become non-dangerous. But then you want them to get their life back in order. And a lot of that stuff is not through medication. A lot of that stuff is through occupational therapy assessments . . . other things . . . that cost money and a lot of programs don't have.

The GPs' experience of limited resources, access, and supports was greater for the rural physicians. The rural nature of some physicians' practices brought to light issues of the economic deprivation of communities and issues of physician and specialist retention in these areas:

- FGR1: But also even trying to access psychologists out where we are . . . a lot of people don't have private medical insurance. So then they are going through [publicly funded] Mental Health [services], and the wait time is long.
- FGR2: And they won't even do family therapy or like marriage counseling. There are certain therapists, they just won't even do because they just can't. They don't have the resources.
- FGR4: And trying to get neuro-psych testing, forget that.
- FGR5: Well, the guy left. What is the guy's name? [psychiatrist's name]?
- FGR2: No, there is a psychometrist. But I think it's like a year or 2 years through the Mental Health Program. To access, it takes forever.

Both psychiatrists and GPs described collaboration with non-physician health care professionals. The psychiatrists, who were generally in more well-resourced contexts, had a greater breadth of colleagues available. The GPs discussed collaborating with other professionals whom they could access easily within their community settings and with those whom they had built trust, including pharmacists. The specific examples provided mainly revolved around drug–drug interactions (e.g. can ziprasidone and antihistamines be used together?), and although they described the importance of having the opportunity to consult with pharmacists multiple times a day as being “lucky,” the GPs may not be using pharmacists as a resource to their full potential:

- FGR3: But they [pharmacists] are all receptive.
- FGR2: Oh, yes, very.
- FGR4: Some of them aren't as good. I have my favourites. In fact, I have a couple that I call whether it's their patient/client or not.
- FGR1: I do too.
- FGR4: Me too.
- FGR2: “Can you look this up for me?”
- FGR5: Yes, exactly. And they absolutely [are]. Because it should be that we should have this collegiality amongst ourselves and take care of each other. And that's the way it should go.
- FGR3: Yes, we are lucky.

Role and identity

Psychiatrists and those physicians with additional experience, training, and mentoring were confident and had strong beliefs about their capabilities, responsibilities, and role regarding the prescribing of antipsychotics with respect to initiation, titrating, monitoring, and discontinuation of therapies. These beliefs often co-occurred with a sense of confidence about the diagnosis and the symptoms being managed:

Physician interviewee 4 (Psychiatrist): . . . This child was born with an addiction to drugs, has a serious attachment problem, serious ADHD. But is there also even just a little bit of something that is, like he's psychotic? Because when he's on the loxapine, he's much better . . . So we do see some like that. And you could say why did we put him on even the loxapine? Because he's calmer. He's not into the same

argumentative interactions in the home. He doesn't run off and disappear as much. He's actually sociable a bit. Not as quickly reactive. And we weren't getting any of those changes with all the [psychosocial and behavioural] training we do, nor with managing with stimulant medication or medication for ADHD. But the moment we added that little bit of loxapine or Risperdal® [risperidone], things got more settled. And I don't maintain people on these medications unless I'm getting that change. I don't do it and hope for it. Because I can see them here day by day, week by week. If I'm not seeing the change, I want them off it.

By contrast, GPs minimized their role. At the start of the focus group, GPs discussed that their role was primarily focused on monitoring and writing repeat prescriptions initiated by a specialist. As the discussion progressed, however, it became evident they had a wider and rather more independent role in antipsychotic prescribing. This was often done without needing or obtaining guidance from a specialist, largely due to issue of inaccessibility. Referrals were made, in attempt to validate their approach when challenges with treatment were ongoing, confirm what they already had come to know, or get an alternate opinion after trying various approaches. GPs stressed the importance of making judgments based on knowing youth and their families for "years" or over "decades" with the needed "collateral" history. This was advantageous and an asset in making clinical decisions, knowing when to refer, and offering potentially viable options for antipsychotic treatments based on family members' responses to medications. This knowledge and lack of access to other resources reinforced role independence. They made reference to their role and connectedness as the primary care provider in recognizing the limitations in the health system, and especially in some situations such as following hospitalization. One GP indicated with agreement from the others: "We are the continuity" (FGR4):

FGR2: I have 2 patients who are in the same family who are on Risperdal® [risperidone] for Tourette syndrome. The older brother . . . he's been on Risperdal® [risperidone] about 5 years. So his was initiated by a neurologist . . . And then his sister, I initiated the Risperdal® [risperidone] because the Mom had come in and said, "Look, he's on this and he's benefitted from it. I think we should try it with her." And she had already tried clonidine and a couple of other drugs, and they didn't have much success with those. And so then I initiated the prescription for the younger sister. And then I'm monitoring . . .

I: What kind of things are you monitoring?

FGR2: In terms of side effects with it. Actually, the younger sister had . . . an elevation in her prolactin level, and she presented with some . . . galactorrhea . . . And so I did a prolactin level, and it was elevated. So I weaned her down off the Risperdal® [risperidone]. When I reduced the dosage, the galactorrhea decreased and her prolactin level came down as well. And then I sent her off to the neurologist, and the neurologist said you can try clonidine, you can try Seroquel® [quetiapine]. So I ended up trying Seroquel® [quetiapine], and she didn't think that that was as effective. And I tried the clonidine again, which she is now on because she didn't want to go back to the Risperdal® [risperidone] because of the galactorrhea. But the Risperdal® [risperidone] had worked best. But yes, so just monitoring for side effects.

Psychiatrists recognized the GPs' experiences with having limited services available and, for those available, their being inaccessible. At the same time, psychiatrists had mixed sentiments regarding GPs overstepping authority and uncertainty as to whether the GPs should be held responsible for prescribing issues with antipsychotics. "Blame" was obfuscated and overlapped

with concerns regarding intrusion into the specialists' scope of practice and doubt about the competence of the GPs. The psychiatrists noted that their services were inappropriately and inefficiently used in many referral cases:

Physician interviewee
(Psychiatrist):

. . . You have people besides child psychiatrists prescribing . . . the problem with that is it would be like me prescribing oncology drugs. So it's being prescribed outside of people's scope. And this is not a territory thing but I find that when you are prescribing that is outside of your field of knowledge, then you are going to be prescribing it inappropriately . . . I see kids that come in crisis and I find out they are on psychotropics . . . And I asked who prescribed this, and they say their family doctor . . . But you see, that could be a problem with them trying to get access to child psychiatrists . . . So you can't blame them . . . Like even if an adult psychiatrist prescribes, I still think they are out of scope. There needs to be a child psychiatrist. It's just my bias . . . we train for so long . . . We are trained to assess kids and adolescents based on developmental context based on the systemic context, if they are part of a family . . . most of my assessments do not end up in a prescription because the interventions are psychosocial . . . a lot of the child symptoms or behaviours aren't going to be solved with medication . . . It's really not about the antipsychotic, it's about treating the family within the context of developmental issues, within psycho-social issues, within their strengths and weaknesses . . . it's rare for me to actually even diagnose depression in young people. It's because a lot of this is adjustment issues. It's not about a psychiatric disorder . . . So if you see what child psychiatrists do, we take a target symptom approach . . . we are working with other disciplines to help us, like with social work . . . Or we work with psychologists . . . occupational therapists . . . Antipsychotics in my opinion should not be prescribed to young people without a child psychiatrist assessing them first. . . .

I:

But you also can appreciate that sometimes they are probably in positions where they feel like they don't have any choice.

Physician interviewee 6
(Psychiatrist):

. . . that logic is not going to fly because I spend a lot of time from referrals from when I see kids after they have been referred from family doctors that I'm taking away meds instead of adding them. So to me that tells me that they are not doing assessments. That these are behavioural adjustment issues . . . GPs and primary care physicians, pediatricians for that matter, shouldn't be prescribing antipsychotics without a child psychiatrist assessing first . . . most of the kids I see, I take them off [antipsychotics] . . . Because it's rare, again, to have internal pathology in this age group.

I:

They are treating the behaviour?

Physician interview 6
(Psychiatrist):

That is right.

The scope of practice challenges and dilution of the specialists' role were also described as a more pervasive problem in the organization of the mental health systems and programming:

Physician interviewee 5 (Psychiatrist): There seems to be the perception . . . that there's never enough [access to resources]. But the thing is the psychiatrists are all spread across many, many different services, many of which we shouldn't be involved with, that aren't really psychiatry . . . everyone is kind of running around and we're all geographically fragmented, and it's very crisis mode driven . . . we have a mental health program that . . . covers everything you can imagine, from social services to forensics to community mental health to supposed specialty psychiatry. We don't use the "P" word apparently anymore. We're not supposed to say "psychiatry," it's all mental health. But I would very much argue that psychiatry is a medical discipline. It's related to, but different than, mental health. It's like saying physical health and cancer. . . Cancer, yes, it's related to well-being and health but it's a very different thing.

Decision-making and filtering

The prescribers' decision-making style and level of involvement with families were variable and individualized. Each prescriber had a process of filtering options for ruling in, or ruling out, therapies in clinical decision-making. What differed among prescribers was whether they involved patients and families in the process of filtering at the start, in the middle, or the end of their process:

Physician interviewee 1 (GP with training and mentorship in psychiatry): . . . I go through the medications with them [patient], and I say, "I think this particular one, and here is why. Here are some of the other options. Here are the potential side effects. . . ." We talk quite a bit about the metabolic aspects of it . . . And I make two things very, very clear to them . . . if they refuse medication, they will still get treatment and follow-up. Because for some people, it does take a while to accept a) I'm ill, and b) medication . . . Some [prescribers] will say, "Well, if you are not taking meds, I will have nothing to do with you." And we have had people referred here [to our practice] who have gone through that.

The physicians' perceived roles and identity, experiential knowledge, context of practice, the evidence-base, and patient and family preferences influenced the decision-making process. The prescribers described attempts to "sell" the initiation of antipsychotics with some patients and families and the discontinuation of antipsychotics to others. The side effect profile of the class of agents was discussed among all prescribers when weighing the benefits and risks of each agent. At the forefront for many prescribers were the concerns about weight gain and metabolic effects as well as lack of knowledge regarding long-term adverse events. Their concerns were not always aligned with parents' fears. For example, one prescriber noted that some parents who readily accepted antipsychotic treatment had significant fears about stimulants given media coverage. Prescribers also discussed attempts to discontinue antipsychotics following an adequate trial or because of concerning adverse effects. The processes involved with negotiating discontinuation were challenged when positive changes had occurred for families with antipsychotic treatments. Clinical equipoise was evident for many especially when the evidence-base was described as equivocal:

Physician interviewee 3 (Psychiatrist): . . . it's pretty equivocal whether augmenting with these agents in severe anxiety is truly helpful . . . Some studies say yes, it can be, and others say there's no real strong evidence that in randomized control trials that it makes a difference. So then you are just going, "well, I've tried all these other things . . . They've had all the cognitive behavioural therapies . . . they are still not functioning." So it's sort of . . . "we've done all the evidence-based stuff so now we're going to be trying it."

Another prescriber anticipated a patient's preferences and also described rallying others in a team approach regarding decision-making:

Physician interviewee 1 (GP, psychotherapist): I am going to be seeing someone who has emerged from a recent hospitalization next week. And I get a sense of someone extremely creative, very talented, does not want medication, does not want to medicate to become even keel. It is not of interest to her. So I'll discover whether or not we have working grounds here. I don't know if we do. I would like that. It's dicey, yes. And the atypicals are really only part of the medication picture in those situations because there's also things like lithium. There can be psycho-stimulants for an ADHD diagnosis, or anticonvulsives as mood stabilizers. And when that kind of medication soup gets going on, I really like to have advice. And that is how I connected with [pharmacist] recently. Because I was working with someone who was experiencing something, and I just wanted to have a handle on how to deal with that. The family doctor is busy. You know, she goes, "Okay, go for it." You know, "I hear you. We agree this is what we are doing. Boom, go for it."

Decision-making was also discussed in an ethical lens related to the context of the system and the child's personal context:

Physician interviewee 3 (Psychiatrist): But the atypicals I think are big. I don't know, it's a big decision whenever I decide to start one. Because not only is there a lot of monitoring involved in it but I think there's so much more we don't know about atypicals in the long run in these developing teens. You know, to tell someone we really don't know what this is going to do. We know it messes around with hormones . . . I don't have so much trouble with the anxiety bordering on psychosis kind of symptoms when you've tried all the standardized treatments. Like I'm getting more comfortable with sort of that being the next step. But my biggest discomfort, and I'm still using it in these situations at times, but my biggest discomfort is with treating really out of control behaviour with atypical antipsychotics. And it's not because they don't work because a lot of times, they do work. Which is the scary part. But sometimes you know, environmentally that there are things that could change or should change . . . There is a team working to try and change these things but nothing is changing them . . . you are actually medicating so a kid can survive based on their temperament and whatever in that environment . . . That is the hardest thing ethically. Yet you know that they won't survive in terms of staying in school, surviving in that home, not getting in trouble with the law. But I find that an ethical battle when you are prescribing in those situations because it's not a benign drug.

Discussion

Physicians struggle to help children and families in a resource-constrained health system and in the context of societal pressures. Antipsychotics are either used as substitutes for other services in poorly resourced contexts or as augmenting agents in context-rich settings where other alternatives have failed to make substantive enough changes to match the expectations of families. Our study contributes unique knowledge regarding the experiences of physicians when prescribing antipsychotics to children and adolescents. To our knowledge, there are no published qualitative studies available regarding physicians' perspectives, and especially those of GPs, regarding antipsychotic prescribing practices for children and adolescents and including diagnoses other than psychosis (e.g. anxiety, Tourette Syndrome, attention deficit hyperactivity disorder (ADHD)). The majority of research that has explored physicians' perspectives has limited its focus to psychiatrists, adult practices, side effect concerns and related management strategies, dosage forms (i.e. injectable vs oral), as well as indications such as schizophrenia and schizoaffective disorder (Barley, Pope, Chilvers, Sipos, & Harrison, 2008; Day et al., 2005; Hamann, Langer, Leucht, Busch, & Kissling, 2004; Murphy et al., 2013; Potkin, Bera, Zubek, & Lau, 2013; Quirk, Chaplin, Lelliott, & Seale, 2012; Seale, Chaplin, Lelliott, & Quirk, 2006, 2007; Sugawara et al., 2014).

Our findings can provide important contextual understanding of the numerous, widely cited, pharmacoepidemiology trend studies that have reported increased prescribing activity regarding these agents and importantly help to provide insights into the growing role of GPs, as opposed to specialists such as psychiatrists and pediatricians, engaged in prescribing antipsychotics (Alessi-Severini et al., 2012; Murphy et al., 2013; Patten et al., 2012; Ronsley et al., 2013). The primary reasons for GPs' prescribing activities as explained in our study are twofold: GPs are attempting to offer families accessible treatments (i.e. antipsychotics) based on availability in a strained system or affordability, and GPs are following the directions and guidance of specialist prescribers along with a suggested management plan. The latter practice is widely accepted as part of usual and customary processes within making referrals from general to specialist care. The former deserves far more attention in research and policy decision-making with implications for both health services financing and delivery. The notion of the pharmacological substitute draws attention to deficiencies or gaps in care for these youth with limited access to nonpharmacological resources caused by the lack of availability within the system or a lack of funding for nonpharmacological resources. These prescribing practices occur despite the significant concerns shared by prescribers and many families regarding the adverse event profiles for these agents. Importantly, these results concur with youth perspectives on the desires for other alternatives and treatment in mental health care (Murphy et al., 2015).

The findings in our study provide valuable information on actual and potential challenges that require consideration for designing and implementing interventions to modify prescriber behaviors. The experience of prescribing antipsychotics is complex, and creating meaningful, sustained changes in practice, where improvements are required, will undoubtedly require the development, implementation, and evaluation of complex interventions over time. Frequently, behavior change interventions for health care professionals include education and training incorporating heterogeneous behavior change techniques. Changes in knowledge-related measures following education and training interventions are often positive, but clinicians' behaviors rarely diverge from their usual practice (Shuval et al., 2007). Based on our findings and advances in behavior change theories for health care professionals, using frameworks such as the Behavior Change Wheel (Michie, van Stralen, & West, 2011) to design interventions following assessments of prescribers' capabilities (i.e. the psychological and physical capacity to engage in activity), opportunities (i.e. social and physical factors outside of the individual that allow for the behavior to occur or prompt the behaviors), motivations (i.e. habitual processes, emotions, analytical decision-making), and behaviors is reasonable and necessary.

Through our analysis, potential issues with power between non-specialists and specialists may be deeply entrenched and supported by symbolic capital (Bourdieu, 2000). The ways in which the role and identity of different kinds of prescribers could influence the design of interventions for improving antipsychotic prescribing and their implementation require further explication.

Limitations

As a result of our sampling technique, participant experiences of prescribing antipsychotics were varied and more extensive with some prescribers versus others. Through our other research projects, we have been influenced by the work of behavior change theories, including the work of Michie et al. (2011). We also cannot claim that our interpretation of the data we collected is the only possible interpretation.

Conclusion

Our results provide knowledge regarding the prescribers' experience of antipsychotics for children and adolescents. These findings help to add context around the numerous pharmacoepidemiology

studies of antipsychotic prescription trends in children and adolescents. Important gaps exist within the health system that are creating opportunities for the initiation and continued use of these agents.

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